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# MONTHLY LABOR REVIEW

VOL. VIII—NO. 5

WASHINGTON

MAY, 1919

## REPORT OF THE COMMISSION ON INTERNATIONAL LABOR LEGISLATION TO THE PEACE CONFERENCE.

The report of the Commission on International Labor Legislation, dated Paris, March 24, 1919, containing a draft convention creating a permanent organization for the promotion of the international regulation of labor conditions, was accepted by the Peace Conference on April 11, 1919, together with certain amendments proposed by G. N. Barnes, of Great Britain. This report embodies nine labor clauses (see p. 23) which were proposed to be inserted in the Treaty of Peace, and on April 28, in plenary session, the Peace Conference considered and adopted these clauses as amended by a redraft (see p. 25) moved by Sir Robert Borden (Canada). The text of the report of the Commission on International Labor Legislation and the amendments are here presented in full.

### 1. TERMS OF REFERENCE AND CONSTITUTION OF COMMISSION.

The Commission on International Labor Legislation was appointed by the Peace Conference on the 31st of January, 1919. The terms of reference were as follows:

That a commission, composed of two representatives apiece from the five Great Powers, and five representatives to be elected by the other Powers represented at the Peace Conference, be appointed to inquire into the conditions of employment from the international aspect, and to consider the international means necessary to secure common action on matters affecting conditions of employment, and to recommend the form of a permanent agency to continue such inquiry and consideration in cooperation with and under the direction of the League of Nations.

At a meeting of the other States on the 27th of January, 1919, it was agreed that Belgium should nominate two representatives on the commission, and Cuba, Poland, and the Czecho-Slovak Republic one each.

The commission was composed as follows:

*United States of America.*—Mr. Samuel Gompers, president of the American Federation of Labor; Hon. E. N. Hurley, president of the American Shipping Board. (Substitutes: Hon. H. M. Robinson; Dr. J. T. Shotwell, professor at Columbia University.)

*The British Empire.*—The Right Hon. G. N. Barnes, M. P., member of the war cabinet. (Substitute: Mr. H. B. Butler, C. B., assistant

secretary, Ministry of Labor.) Sir Malcolm Delevingne, K. C. B., assistant undersecretary of state, Home Office.

*France.*—Mr. Colliard, Minister of Labor. (Substitute: Mr. Arthur Fontaine, counselor of state, director of labor.) Mr. Loucheur, minister of industrial reconstruction. (Substitute: Mr. Léon Jouhaux, general secretary of the Confédération Générale du Travail.)

*Italy.*—Baron Mayor des Planches, honorable ambassador, commissioner general for emigration. Mr. Cabrini, deputy, vice president of the Supreme Labor Council. (Substitute: Mr. Coletti.)

*Japan.*—Mr. Otchiai, envoy extraordinary, minister plenipotentiary of His Majesty the Emperor of Japan at The Hague. Mr. Oka, formerly director of commercial and industrial affairs at the Ministry of Agriculture and Commerce.

*Belgium.*—Mr. Vandervelde, minister of justice and of state. (Substitute: Mr. La Fontaine, senator.) Mr. Mahaim, professor at Liege University, secretary to the Belgian section of the Association for the Legal Protection of Workmen.

*Cuba.*—Mr. De Bustamante, professor at Habana University. (Substitutes: Mr. Raphael Martinez Ortiz, minister plenipotentiary; Mr. De Blanck, minister plenipotentiary.)

*Poland.*—Count Zoltowski, member of the Polish National Committee, afterwards replaced by Mr. Stanislas Patek, counselor of the court of cassation. (Substitute: Mr. François Sokal, director general of labor.)

*Czecho-Slovak Republic.*—Mr. Benès, minister for foreign affairs, afterwards replaced by Mr. Rudolph Broz.

The following were appointed officers of the commission:

President, Mr. Samuel Gompers (U. S. A.).

Vice presidents: The Right Hon. G. N. Barnes, M. P. (British Empire); Mr. Colliard (France).

General secretary, Mr. Arthur Fontaine (France).

Assistant general secretary, Mr. H. B. Butler (British Empire).

Secretaries: Baron Capelle (substitute, Count de Grunne), Belgium; Mr. di Palma Castiglione, Italy; Mr. Oyster, U. S. A.; Mr. Yoshisaka, Japan.

## 2. REPORT OF THE COMMISSION

The commission has held 35 meetings, and has drawn up its conclusions in two parts. The first is a draft convention containing provisions for the establishment of a permanent organization for international labor legislation. This convention, which was based on a draft presented by the British delegation, has been the subject of the most careful examination and discussion. The first part of this report may conveniently take the form of a commentary thereon.



The second part of the commission's conclusions is in the form of clauses containing declarations of principle in regard to a number of matters which are of vital importance to the labor world. At the opening sittings, the various delegations agreed on the need for such declarations, which the commission suggests should be included in the Treaty of Peace, in order that it may mark not only the close of the period which culminated in the World War, but also the beginning of a better social order and the birth of a new civilization.

Part I.—Permanent Organization.

PREAMBLE.

The main idea underlying the scheme embodied in the convention is that the constitution of the League of Nations will not provide a real solution of the troubles which have beset the world in the past, and will not even be able to eliminate the seeds of international strife, unless it provides a remedy for the industrial evils and injustices which mar the present state of society. In proposing, therefore, to establish a permanent organization in order to adjust labor conditions by international action, the commission felt that it was taking an indispensable step toward the achievement of the objects of the League of Nations and has given expression to this idea in the Preamble, which defines the objects and scope of the proposed organization.

CHAPTER I.

Chapter I provides the machinery of the permanent organization proposed. In the first place, it is stipulated (art. 1) that participation in this organization shall be a condition of membership of the League of Nations, since every State member of the league is morally bound to accept the principles set forth in the Preamble, if it has really at heart the promotion of the cause of justice and humanity.

The organization itself is divided into two parts: (1) The International Labor Conference; (2) The International Labor Office controlled by a Governing Body. (Art. 2.)

*1. International Labor Conference.*

This conference will meet at least annually and will consist of delegates nominated by each of the High Contracting Parties, two of whom will be directly appointed by the Governments, and the other two will be chosen in agreement with the industrial organizations representative of their employers and workpeople, respectively. (Art. 3.)

Each delegate will vote individually (art. 4). It was strongly felt by the commission that if the conference was really to be representative of all those concerned with industry and to command their confidence, the employers and work people must be allowed to express their views with complete frankness and freedom, and that a departure from the traditional procedure of voting by national units was therefore necessary. It was accordingly thought that the employers' and workpeople's delegates should be entitled to speak and vote independently of their Governments.

Some difference of opinion made itself felt on the commission as to the relative numbers of the delegates representing the Governments, the employers, and the workpeople, respectively. The French, American, Italian, and Cuban delegations contended that each of these three parties should have equal voting power. They maintained that the working classes would never be satisfied with a representation which left the Government and the employers combined in a majority of three to their one. In other words the proposal amounted to giving the States a veto on the proceedings of the conference which would create so much distrust of it among the workers that its influence would be seriously prejudiced from the start. This view was contested by the British, Belgian, and other delegations, who pointed out that as the conference was not simply an assembly for the purpose of passing resolutions, but would draw up draft conventions which the States would have to present to their legislative authorities it was essential that the Governments should have at least an equal voice. Otherwise it might often happen that conventions adopted by a two-thirds majority of the conference would be rejected by the legislatures of the various States, which would have the effect of rendering the proceedings of the conference nugatory and would quickly destroy its influence and prestige. The adoption of a proposal to which the majority of the Governments were opposed would not lead to any practical result, as the legislative authorities of the Governments whose delegates were in the minority would in all probability refuse to accept it. Moreover it was likely, especially in the future, that the Government delegates would vote more often with the workers than against them. If this were so, it was obviously to the advantage of the latter that the Governments should have two votes instead of one, as it would render it easier for them to obtain a two-thirds majority, which under the Franco-American proposal would be practically impossible if the employers voted in a body against them.

The commission finally decided by a narrow majority to maintain the proposal that each Government should have two delegates.

The Italian delegation, which united with the French delegation in urging the importance of securing representation for agricultural interests, were to some extent reconciled to the above decision by the consideration that, as the Governments would have two delegates, it would be easier to secure such representation. It should also be observed that, as different technical advisers may be appointed for each subject of discussion, agricultural advisers may be selected when necessary.

## *2. International Labor Office (arts. 6 to 13).*

This office will be established at the seat of the League of Nations, as part of its administrative organization. It will be controlled by a governing body of 24 members, the composition of which is provided for in the protocol to article 7. Like the conference, the governing body will consist of representatives of the Governments, employers, and workpeople. It will include 12 representatives of the Governments, 8 of whom will be nominated by the States of chief industrial importance, and the remaining 12 will consist of 6 members nominated by the employers' delegates to the conference, and 6 nominated by the workers' delegates. The objects and functions of the office are sufficiently explained in the articles referred to.

## CHAPTER II.

### *1. Procedure (arts. 14 to 21).*

This portion of the convention contains one article of vital importance, namely, article 19, which treats of the obligations of the States concerned in regard to the adoption and ratification of draft conventions agreed upon by the International Conference.

The original draft proposed that any draft convention adopted by the conference by a two-thirds majority must be ratified by every State participating, unless within one year the national legislature should have expressed its disapproval of the draft convention. This implied an obligation on every State to submit any draft convention approved by the conference to its national legislature within one year, whether its own Government representatives had voted in favor of its adoption or not. This provision was inspired by the belief that although the time had not yet come when anything in the nature of an international legislature whose decisions should be binding on the different States was possible, yet it was essential for the progress of international labor legislation to require the Governments to give their national legislatures the opportunity of expressing their opinion on the measures favored by a two-thirds majority of the Labor Conference.



The French and Italian delegations, on the other hand, desired that States should be under an obligation to ratify conventions so adopted, whether their legislative authorities approved them or not, subject to a right of appeal to the Executive Council of the League of Nations. The council might invite the conference to reconsider its decision, and in the event of its being reaffirmed there would be no further right of appeal.

Other delegations, though not unsympathetic to the hope expressed in the first resolution printed at the end of the draft convention, that in course of time the labor conference might, through the growth of the spirit of internationality, acquire the powers of a truly legislative international assembly, felt that the time for such a development was not yet ripe. If an attempt were made at this stage to deprive States of a large measure of their sovereignty in regard to labor legislation, the result would be that a considerable number of States would either refuse to accept the present convention altogether, or, if they accepted it, would subsequently denounce it, and might even prefer to resign their membership of the League of Nations rather than jeopardize their national economic position by being obliged to carry out the decisions of the International Labor Conference. The majority of the commission, therefore, decided in favor of making ratification of a convention subject to the approval of the national legislatures or other competent authorities.

The American delegation, however, found themselves unable to accept the obligations implied in the British draft on account of the limitations imposed on the central executive and legislative powers by the constitution of certain Federal States, and notably of the United States themselves. They pointed out that the Federal Government could not accept the obligation to ratify conventions dealing with matters within the competence of the 48 States of the Union, with which the power of labor legislation for the most part rested. Further, the Federal Government could not guarantee that the constituent States, even if they passed the necessary legislation to give effect to a convention, would put it into effective operation, nor could it provide against the possibility of such legislation being declared unconstitutional by the supreme judicial authorities. The Government could not, therefore, engage to do something which was not within their power to perform, and the nonperformance of which would render them liable to complaint.

The commission felt that they were here faced by a serious dilemma which threatened to make the establishment of any real system of international labor legislation impossible. On the one hand, its range and effectiveness would be almost fatally limited if a country of such industrial importance as the United States did not participate.

On the other hand, if the scheme were so weakened as to impose no obligation on States to give effect to, or even to bring before their legislative authorities, the decisions of the labor conference, it was clear that its work would tend to be confined to the mere passage of resolutions instead of resulting in the promotion of social reforms with the sanction of law behind them.

The commission spent a considerable amount of time in attempting to devise a way out of this dilemma and is glad to be able to record that it ultimately succeeded in doing so. Article 19 as now drafted represents a solution found by a subcommission consisting of representatives of the American, British, and Belgian delegations specially appointed to consider the question. It provides that the decisions of the labor conference may take the form either of recommendations or of draft conventions. Either must be deposited with the secretary-general of the League of Nations and each State undertakes to bring it within one year before its competent authorities for the enactment of legislation or other action. If no legislation or other action to make a recommendation effective follows, or if a draft convention fails to obtain the consent of the competent authorities concerned, no further obligation will rest on the State in question. In the case of a Federal State, however, whose power to enter into conventions on labor matters is subject to limitations, its Government may treat a draft convention to which such limitations apply as a recommendation only.

The commission felt that there might in any event be instances in which the form of a recommendation affirming a principle would be more suitable than that of a draft convention, which must necessarily provide for the detailed application of principles in a form which would be generally applicable by every State concerned. Subjects will probably come before the conference which, owing to their complexity and the wide differences in the circumstances of different countries, will be incapable of being reduced to any universal and uniform mode of application. In such cases a convention might prove impossible, but a recommendation of principles in more or less detail which left the individual States freedom to apply them in the manner best suited to their conditions would undoubtedly have considerable value.

The exception in the case of Federal States is of greater importance. It places the United States and States which are in a similar position under a less degree of obligation than other States in regard to draft conventions. But it will be observed that the exception extends only to those Federal States which are subject to limitations in respect of their treaty-making powers on labor matters, and, further, that it only extends in so far as those limitations apply in any par-

ticular case. It will not apply in the case of a convention to which the limitations do not apply, or after any such limitations as may at present exist have been removed. Though reluctant to contemplate an arrangement under which all States would not be under identical obligations, the commission felt that it was impossible not to recognize the constitutional difficulties which undoubtedly existed in the case of certain Federal States, and therefore proposed the above solution as the best possible in the circumstances.

Attention should be drawn to the protocol to article 19. The fear was expressed that the article might be interpreted as implying that a State would be required to diminish the protection already afforded to the workers by its legislation as a result of the adoption of a recommendation or draft convention by the conference; and in consequence the protocol was added in order to make it quite clear that such an interpretation was inadmissible.

It should be added that the Japanese delegation abstained from voting on article 19, as they had not yet received instructions from their Government in the matter. The Italian delegation also abstained on the ground of the inadequacy of the powers given to the conference.

## *2. Enforcement (arts. 22 to 34).*

These articles provide machinery whereby a State which fails to carry out its obligations arising under article 19, or which fails to enforce a convention which it has ratified, may be made subject to economic measures. This machinery is briefly as follows:

An industrial association of employers and workpeople may make representations to the International Labor Office which the governing body may at its discretion communicate to the State complained of for its observations. (Art. 23.) If no satisfactory reply is received, the governing body may publish the correspondence (art. 24), which in most cases will probably create sufficient pressure by public opinion to cause the complaint to be remedied.

The governing body also has the power, either on its own motion or on receipt of a complaint from a Government or from a delegate to the conference, to apply to the secretary-general of the League of Nations to nominate a commission of inquiry. For the purpose of such inquiries, each high contracting party undertakes to nominate one employer, one workman, and one person of independent standing, and each commission shall consist of one person drawn from each of these three categories. (Arts. 25 and 26.) The commission will report on the facts, recommend the steps which should be taken to meet the complaint, and indicate the economic measures, if any, which it considers would be appropriate in the event of the condition complained of not being remedied. (Art. 28.)



Appeal may be made to the Permanent Court of International Justice of the League of Nations, which shall have power to review the findings of the commission. (Arts. 29 to 32.) If the defaulting State fails to carry out the recommendations of the commission or the permanent court, as the case may be, within the specified time, it will then be open to the other States to take the economic measures indicated against it. (Art. 33.)

It will be seen that the above procedure has been carefully devised in order to avoid the imposition of penalties, except in the last resort, when a State has flagrantly and persistently refused to carry out its obligations under a convention. It can hardly be doubted that it will seldom, if ever, be necessary to bring these powers into operation, but the commission consider that the fact of their existence is nevertheless a matter of almost vital importance to the success of the scheme.

The representatives of the working classes in some countries have pressed their delegates to urge more drastic provisions in regard to penalties. The commission, while taking the view that it will in the long run be preferable as well as more effective to rely on the pressure of international public opinion rather than on economic measures, nevertheless considers it necessary to retain the possibility of the latter in the background. If all forms of sanction were removed, the effectiveness of the scheme, and, what is almost equally important, the belief in its effectiveness, would be in a great measure destroyed.

### CHAPTER III.

#### *General.*

This chapter does not call for much comment, but attention should perhaps be drawn to the provisions of article 35, which provide that the British Dominions and India, and any colonies or possessions of any State which may hereafter be recognized as fully self-governing by the executive council of the League of Nations, shall have the same rights and obligations under the convention as if they were separate high contracting parties. It seemed evident to the commission that colonies which were fully self-governing, not only as regards labor legislation but generally, must be regarded as separate entities for the purposes of the labor conference, but it was decided that a State and its self-governing colonies should not have more than one seat in the governing body. In the case of colonies which are not fully self-governing, the mother country undertakes the obligation to apply labor conventions to them, unless local conditions render it impossible to apply them either wholly or in part.

## CHAPTER IV.

*Transitory provisions.*

This chapter provides, inter alia, for the holding of the first conference in October, 1919.

The commission felt it was essential that the conference should meet at the earliest possible moment, but that, if it was to do its work effectively, some time must be allowed for the collection of information and for the different countries to prepare their views on the various subjects for discussion. The conference could, therefore, hardly meet earlier than October. In the schedule to article 39 it is proposed that the arrangements for this conference should be made by an international committee consisting of representatives of the States named, with power to invite other States to send representatives, if necessary. It is suggested that the United States Government might be willing to convene the conference at Washington, and the commission much hopes that they will be willing to undertake this task. It is also suggested that the peace conference should approve the agenda set out in the same schedule.

The Italian delegation proposed that all nations should be admitted to the conference immediately after the signature of the peace treaty, but the commission confined itself to passing the second resolution attached to the draft convention.

In conclusion, it should be remarked that after a long discussion on the question of adopting certain measures in the interest of seamen, the commission thought that "the very special questions concerning the minimum conditions to be accorded to seamen might be dealt with at a special meeting of the International Labor Conference devoted exclusively to the affairs of seamen," at which the delegates and technical advisers could accordingly be chosen from the shipping community. (See resolution attached to the convention.)

**Part II.—Labor Clauses.**

The commission were unanimous in thinking that their work would not be complete if it were simply confined to setting up a permanent machinery for international labor legislation. It was not within their competence or within their terms of reference to deal with specific questions relating to industrial conditions and to work them out with the detail necessary for the framing of proposals which could be accepted in a binding form. So impressed were they, however, with the urgent need for recognizing explicitly certain fundamental principles as necessary to social progress, that they decided to submit a series of declarations for insertion in the peace treaty. They did not feel called upon, however, to draw up a charter containing all the reforms which may be hoped for in a more or less distant future, but

confined themselves to principles the realization of which may be contemplated in the near future.

It will be seen that the high contracting parties are not asked to give immediate effect to them, but only to indorse them generally. It will be the duty of the International Labor Conference to examine them thoroughly and to put them in the form of recommendations or draft conventions elaborated with the detail necessary for their practical application.

Proposals were placed before the commission by the Italian, French, American, Belgian, and British delegations as to the declarations which should be made. The commission decided that no declaration should be submitted to the peace conference unless it were adopted by a two-thirds majority, and it now has the honor of submitting nine declarations, all of which obtained such a majority and some of which were adopted unanimously.

It should be added, in conclusion, that a majority, but not a two-thirds majority, was obtained for a proposal, couched in very general terms, which suggested the application to agriculture of the general principles of labor legislation and which arose out of an Italian proposal in regard to the limitation of the hours of work in agriculture. The delegates who voted against this proposal were, as they explained, by no means hostile to its general idea, but they thought that a proposal in such wide terms was not suitable for inclusion among the declarations to be put forward.

SAMUEL GOMPERS,  
*President.*

ARTHUR FONTAINE,  
*General Secretary.*  
HAROLD BUTLER,  
*Assistant General Secretary.*

PARIS, March 24, 1919.

A DRAFT CONVENTION CREATING A PERMANENT ORGANIZATION  
FOR THE PROMOTION OF THE INTERNATIONAL REGULATION OF  
LABOR CONDITIONS.

PREAMBLE.

Whereas the League of Nations has for its object the establishment of universal peace, and such a peace can be established only if it is based upon social justice;

And whereas conditions of labor exist involving such injustice, hardship, and privation to large numbers of people as to produce unrest so great that the peace and harmony of the world are imperiled, and an improvement of those conditions is urgently required, as, for example, by the regulation of the hours of work, including the



establishment of a maximum working day and week, the regulation of the labor supply, the prevention of unemployment, the provision of an adequate living wage, the protection of the worker against sickness, disease, and injury arising out of his employment, the protection of children, young persons and women, provision for old age and injury, protection of the interests of workers when employed in countries other than their own, recognition of the principle of freedom of association, the organization of technical and vocational education and other measures;

Whereas, also, the failure of any nation to adopt humane conditions of labor is an obstacle in the way of other nations which desire to improve the conditions in their own countries;

The high contracting parties, moved by sentiments of justice and humanity, as well as by the desire to secure the permanent peace of the world, agree to the following convention:

#### CHAPTER I.—*Organization.*

ARTICLE 1. The high contracting parties, being the States members of the League of Nations, hereby decide to establish a permanent organization for the promotion of the objects set forth in the preamble, and for this purpose hereby accept the provisions contained in the following articles.

ART. 2. The permanent organization shall consist of (i) a general conference of representatives of the high contracting parties and (ii) an international labor office controlled by the governing body described in article 7.

ART. 3. The meetings of the general conference of representatives of the high contracting parties shall be held from time to time as occasion may require, and at least once in every year. It shall be composed of four representatives of each of the high contracting parties, of whom two shall be Government delegates and the two others shall be delegates representing respectively the employers and the workpeople of each of the high contracting parties.

Each delegate may be accompanied by advisers, who shall not exceed two in number for each item on the agenda of the meeting. When questions specially affecting women are to be considered by the conference, one at least of the advisers should be a woman.

The high contracting parties undertake to nominate non-Government delegates and advisers chosen in agreement with the industrial organizations, if such organizations exist, which are most representative of employers or workpeople, as the case may be, in their respective countries.

Each delegate may be accompanied at each sitting of the conference by not more than two advisers. The advisers shall not speak except



on a request made by the delegate whom they accompany and by the special authorization of the president of the conference, and may not vote.

A delegate may in writing addressed to the president appoint one of his advisers to act as his deputy, and the adviser, while so acting, shall be allowed to speak and vote.

The names of the delegates and their advisers will be communicated to the International Labor Office by the Government of each of the high contracting parties.

The credentials of delegates and their advisers shall be subject to scrutiny by the conference, which may, by two-thirds of the votes cast by the delegates present, refuse to admit any delegate or adviser whom it deems not to have been nominated in accordance with the undertaking contained in this article.

ART. 4. Every delegate shall be entitled to vote individually on all matters which are taken into consideration by the conference.

If one of the high contracting parties fails to nominate one of the non-Government delegates whom it is entitled to nominate, the other non-Government delegate shall be allowed to sit and speak at the conference, but not to vote.

If in accordance with article 3 the conference refuses admission to a delegate of one of the high contracting parties, the provisions of the present article shall apply as if that delegate had not been nominated.

ART. 5. The meetings of the conference shall be held at the seat of the League of Nations, or at such other place as may be decided by the conference at a previous meeting by two-thirds of the votes cast by the delegates present.

ART. 6. The International Labor Office shall be established at the seat of the League of Nations as part of the organization of the league.

ART. 7. The International Labor Office shall be under the control of a governing body consisting of 24 members, appointed in accordance with the provisions of the protocol hereto.

The governing body shall, from time to time, elect one of its members to act as its chairman, shall regulate its own procedure and shall fix its own times of meeting. A special meeting shall be held if a written request to that effect is made by at least 10 members.

ART. 8. There shall be a director of the International Labor Office, appointed by the governing body, who shall, subject to the instructions of the governing body, be responsible for the efficient conduct of the International Labor Office and for such other duties as may be assigned to him.

The director or his deputy shall attend all meetings of the governing body.

ART. 9. The staff of the International Labor Office shall be appointed by the director, who shall, so far as is possible with due regard to the efficiency of the work of the office, select persons of different nationalities. A certain number of these persons should be women.

ART. 10. The functions of the International Labor Office shall include the collection and distribution of information on all subjects relating to the international adjustment of conditions of industrial life and labor, and particularly the examination of subjects which it is proposed to bring before the conference with a view to the conclusion of international conventions, and the conduct of such special investigations as may be ordered by the conference.

It will prepare the agenda for the meetings of the conference.

It will carry out the duties required of it by the provisions of this convention in connection with international disputes.

It will edit and publish a periodical paper in the French and English languages, and in such other languages as the governing body may think desirable, dealing with problems of industry and employment of international interest.

Generally, in addition to the functions set out in this article, it shall have such other functions, powers, and duties as may be assigned to it by the conference.

ART. 11. The Government departments of any of the high contracting parties which deal with questions of industry and employment may communicate directly with the director through the representative of their State on the governing body of the International Labor Office, or failing any such representative, through such other qualified official as the Government may nominate for the purpose.

ART. 12. The International Labor Office shall be entitled to the assistance of the secretary-general of the League of Nations in any matter in which it can be given.

ART. 13. Each of the high contracting parties will pay the traveling and subsistence expenses of its delegates and their advisers and of its representatives attending the meetings of the conference or governing body, as the case may be.

All the other expenses of the International Labor Office and of the meetings of the conference or governing body shall be paid to the director by the secretary-general of the League of Nations out of the general funds of the league.

The director shall be responsible to the secretary-general of the league for the proper expenditure of all moneys paid to him in pursuance of this article.

CHAPTER II.—*Procedure.*

ART. 14. The agenda for all meetings of the conference will be settled by the governing body, who shall consider any suggestion as to the agenda that may be made by the Government of any of the high contracting parties or by any representative organization recognized for the purpose of article 3.

ART. 15. The director shall act as the secretary of the conference, and shall circulate the agenda to reach the high contracting parties, and through them the non-Government delegates when appointed, four months before the meeting of the conference.

ART. 16. Any of the Governments of the high contracting parties may formally object to the inclusion of any item or items in the agenda. The grounds for such objection shall be set forth in a reasoned statement addressed to the director, who shall circulate it to all the high contracting parties. Items to which such objection has been made shall not, however, be excluded from the agenda, if at the conference a majority of two-thirds of the votes cast by the delegates present is in favor of considering them.

If the conference decides (otherwise than under the preceding paragraph) by two-thirds of the votes cast by the delegates present that any subject shall be considered by the conference, that subject shall be included in the agenda for the following meeting.

ART. 17. The conference shall regulate its own procedure, shall elect its own president, and may appoint committees to consider and report on any matter.

Except as otherwise expressly provided in this convention, all matters shall be decided by a simple majority of the votes cast by the delegates present.

A vote shall be void unless the total number of votes cast is equal to half the number of the delegates attending the conference.

ART. 18. The conference may add to any committees which it appoints technical experts, who shall be assessors without power to vote.

ART. 19. When the conference has decided on the adoption of proposals with regard to an item in the agenda, it will rest with the conference to determine whether these proposals should take the form: (a) Of a recommendation to be submitted to the high contracting parties for consideration with a view to its being given effect by national legislation or otherwise, or (b) of a draft international convention for ratification by the high contracting parties.

In either case a majority of two-thirds of the votes cast by the delegates present shall be necessary on the final vote for the adoption of the recommendation or draft convention, as the case may be, by the conference.



A copy of the recommendation or draft convention shall be authenticated by the signature of the president of the conference and of the director and shall be deposited with the secretary-general of the League of Nations. The secretary-general will communicate a certified copy of the recommendation or draft convention to each of the high contracting parties.

Each of the high contracting parties undertakes that it will, within the period of one year at most from the end of the meeting of the conference, bring the recommendation or draft convention before the authority or authorities within whose competence the matter lies for the enactment of legislation or other action.

In the case of a recommendation, the high contracting parties will inform the secretary-general of the action taken.

In the case of a draft convention, the high contracting party will, if it obtains the consent of the authority or authorities within whose competence the matter lies, communicate the formal ratification of the convention to the secretary-general and will take such action as may be necessary to make effective the provisions of such convention.

If on a recommendation no legislative or other action to make such recommendation effective is taken, or if the draft convention fails to obtain the consent of the authority or authorities within whose competence the matter lies, no further obligation shall rest upon the high contracting party.

In the case of a Federal State, the power of which to enter into conventions on labor matters is subject to limitations, it shall be in the discretion of the Government of such State to treat a draft convention to which such limitations apply as a recommendation only, and the provisions of this article with respect to recommendations shall apply in such case.

*(In regard to the interpretation of this article reference should be made to the protocol.)*

ART. 20. Any convention so ratified shall be registered by the secretary-general of the League of Nations, but shall only be binding upon the States which ratify it, subject to any conditions which may be contained in the convention itself.

ART. 21. If any convention laid before the conference for final consideration fails to secure the support of two-thirds of the votes cast by the delegates present, it shall nevertheless be within the right of any of the high contracting parties to agree to such convention among themselves.

Any convention so agreed to shall be communicated by the Governments of the States concerned to the secretary-general of the League of Nations, who shall register it.

ART. 22. Each of the high contracting parties agrees to make an annual report to the International Labor Office on the measures which it has taken to give effect to the provisions of conventions to which it is a party. These reports shall be made in such form and shall contain such particulars as the governing body may request. The director shall lay a summary of these reports before the next meeting of the conference.

ART. 23. In the event of any representation being made to the International Labor Office by an industrial association of employers or of workpeople that any of the high contracting parties has failed to secure in any respect the effective observance within its jurisdiction of any convention to which it is a party, the governing body may communicate this representation to the State against which it is made and may invite that State to make such statement on the subject as it may think fit.

ART. 24. If no statement is received within a reasonable time from the State against which the representation is made, or if the statement when received is not deemed to be satisfactory by the governing body, the latter shall have the right to publish the representation and the statement, if any, made in reply to it.

ART. 25. Any of the high contracting parties shall have the right to file a complaint with the International Labor Office if it is not satisfied that any other of the high contracting parties is securing the effective observance of any convention which both have ratified in accordance with the foregoing articles.

The governing body may, if it thinks fit, before referring such a complaint to a commission of inquiry, as hereinafter provided for, communicate with the State against which the complaint is made in the manner described in article 23.

If the governing body do not think it necessary to communicate the complaint to the State against which it is made, or if, when they have made such communication, no statement in reply has been received within a reasonable time which the governing body considers to be satisfactory, the governing body may apply for the appointment of a commission of inquiry to consider the complaint and to report thereon.

The governing body may adopt the same procedure either of its own motion or on receipt of a complaint from a delegate to the conference.

When any matter arising out of articles 24 or 25 is being considered by the governing body, the State against which the representation or complaint is made shall, if not already represented thereon, be entitled to send a representative to take part in the proceedings of the governing body while the matter is under consideration.

Adequate notice of the date on which the matter will be considered shall be given to the State against which the representation or complaint is made.

ART. 26. The commission of inquiry shall be constituted in accordance with the following provisions:

Each of the high contracting parties agrees to nominate within six months of the date on which this convention comes into force, three persons of industrial experience, of whom one shall be a representative of employers, one a representative of workpeople, and one a person of independent standing, who shall together form a panel from which the members of the commission of inquiry shall be drawn.

The qualifications of the persons so nominated shall be subject to scrutiny by the governing body, which may by two-thirds of the votes cast by the members present refuse to accept the nomination of any person whose qualifications do not in its opinion comply with the requirements of the present article.

Upon the application of the governing body, the secretary-general of the League of Nations shall nominate three persons, one from each section of this panel, to constitute the commission of inquiry, and shall designate one of them as the president of the commission. None of these three persons shall be a person nominated to the panel by any State directly concerned in the complaint.

ART. 27. The high contracting parties agree that, in the event of the reference of a complaint to a commission of inquiry under article 25, they will each, whether directly concerned in the complaint or not, place at the disposal of the commission all the information in their possession which bears upon the subject matter of the complaint.

ART. 28. When the commission of inquiry has fully considered the complaint, it shall prepare a report embodying its findings on all questions of fact relevant to determining the issue between the parties and containing such recommendations as it may think proper as to the steps which should be taken to meet the complaint and the time within which they should be taken.

It shall also indicate in this report the measures, if any, of an economic character against a defaulting State which it considers to be appropriate, and which it considers other States would be justified in adopting.

ART. 29. The secretary-general of the League of Nations shall communicate the report of the commission of inquiry to each of the States concerned in the complaint, and shall cause it to be published.

Each of these States shall within one month inform the secretary-general of the League of Nations whether or not it accepts the recom-



mendations contained in the report of the commission; and if not, whether it proposes to refer the complaint to the Permanent Court of International Justice of the League of Nations.

ART. 30. In the event of any of the high contracting parties failing to take within the specified period the action required by article 19, any other of the high contracting parties shall be entitled to refer the matter to the Permanent Court of International Justice.

ART. 31. The decision of the Permanent Court of International Justice to which a complaint has been referred shall be final.

ART. 32. The Permanent Court of International Justice may affirm, vary, or reverse any of the findings or recommendations of the commission of inquiry, if any, and shall in its decision indicate the measures, if any, of an economic character against a defaulting State which it considers to be appropriate, and which other States would be justified in adopting.

ART. 33. In the event of any State failing to carry out within the time specified the recommendations, if any, contained in the report of the commission of inquiry, or in the decision of the Permanent Court of International Justice, as the case may be, any other State may take against that State the measures of an economic character indicated in the report of the commission or in the decision of the court as appropriate to the case.

ART. 34. The defaulting State may at any time inform the governing body that it has taken the steps necessary to comply with the recommendations of the commission of inquiry or in the decision of the Permanent Court of International Justice, as the case may be, and may request it to apply to the secretary-general of the league to constitute a commission of inquiry to verify its contention. In this case the provisions of articles 26, 27, 28, 29, 31, and 32 shall apply, and if the report of the commission of inquiry or decision of the Permanent Court of International Justice is in favor of the defaulting State, the other States shall forthwith discontinue the measures of an economic character that they have taken against the defaulting State.

### CHAPTER III.—*General.*

ART. 35. The British Dominions and India shall have the same rights and obligations under this convention as if they were separate high contracting parties.

The same shall apply to any colony or possession of any of the high contracting parties which on the application of such high contracting party is recognized as fully self-governing by the executive council of the League of Nations.

The high contracting parties engage to apply conventions which they have ratified in accordance with the provisions of the present



convention to their colonies, protectorates, and possessions which are not fully self-governing:

(1) Except where owing to the local conditions the convention is inapplicable; or

(2) Subject to such modifications as may be necessary to adapt the convention to local conditions.

And each of the high contracting parties shall notify to the international labor office the action taken in respect of each of its colonies, protectorates, and possessions which are not fully self-governing.

ART. 36. Any State not a party to this convention, which may hereafter become a member of the League of Nations, shall be deemed ipso facto to have adhered to this convention.

ART. 37. Amendments to this convention which are adopted by the conference by a majority of two-thirds of the votes cast by the delegates present shall take effect when ratified by the States whose representatives compose the executive council of the League of Nations and by three-fourths of the States whose representatives compose the body of delegates of the league.

ART. 38. Any question or dispute relating to the interpretation of this convention or of any subsequent convention concluded by the high contracting parties in pursuance of the provisions of this convention shall be referred for decision to the Permanent Court of International Justice.

#### CHAPTER IV.—*Transitory Provisions.*

ART. 39. The first meeting of the conference shall take place in October, 1919. The place and agenda for this meeting shall be as specified in the schedule annexed hereto.

Arrangements for the convening and the organization of the first meeting of the conference will be made by the Government designated for the purpose in the said schedule. That Government shall be assisted in the preparation of the documents for submission to the conference by an international committee constituted as provided in the said schedule.

The expenses of the first meeting and of all subsequent meetings held before the League of Nations has been able to establish a general fund, other than the expenses of delegates and their advisers, will be borne by the high contracting parties in accordance with the apportionment of the expenses of the International Bureau of the Universal Postal Union.

ART. 40. Until the League of Nations has been constituted all communications which under the provisions of the foregoing articles should be addressed to the secretary-general of the League will be

preserved by the director of the International Labor Office, who will transmit them to the secretary-general of the League when appointed.

ART. 41. Pending the creation of a Permanent Court of International Justice, disputes which in accordance with this convention would be submitted to it for decision will be referred to a tribunal of three persons appointed by the executive council of the League of Nations.

#### PROTOCOL TO ARTICLE 7.

The governing body of the international labor office shall be constituted as follows: Twelve representatives of the Governments, six members elected by the delegates to the conference representing the employers, six members elected by the delegates to the conference representing the workpeople.

Of the 12 members representing the Governments eight shall be nominated by the high contracting parties which are of the chief industrial importance, and four shall be nominated by the high contracting parties selected for the purpose by the Government delegates to the conference, excluding the delegates of the eight States mentioned above. No high contracting party, together with its Dominions and Colonies, whether self-governing or not, shall be entitled to nominate more than one member.

Any question as to which are the high contracting parties of the chief industrial importance shall be decided by the executive council of the League of Nations.

The period of office of members of the governing body will be three years. The method of filling vacancies and other similar questions may be determined by the governing body subject to the approval of the conference.

#### PROTOCOL TO ARTICLE 19.

In no case shall any of the high contracting parties be asked or required, as a result of the adoption of any recommendation or draft convention by the conference, to diminish the protection afforded by its existing legislation to the workers concerned.

#### SCHEDULE REFERRED TO IN ARTICLE 39.

##### *First meeting of Annual Labor Conference, 1919.*

The place of meeting will be Washington.

The Government of the United States of America is requested to convene the conference.

The international organizing committee will consist of seven members, appointed by the United States of America, Great Britain,

France, Italy, Japan, Belgium, and Switzerland. The committee may, if it thinks necessary, invite other States to appoint representatives.

Agenda:

1. Application of principle of 8 hours day or of 48 hours week.
2. Question of preventing or providing against unemployment.
3. Women's employment—
  - (a) Before and after childbirth, including the question of maternity benefit.
  - (b) During the night.
  - (c) In unhealthy processes.
4. Employment of children—
  - (a) Minimum age of employment.
  - (b) During the night.
  - (c) In unhealthy processes.
5. Extension and application of the international conventions adopted at Bern in 1906 on the prohibition of night work for women employed in industry and the prohibition of the use of white phosphorus in the manufacture of matches.

4. RESOLUTIONS ADOPTED BY THE COMMISSION.

I.—*Resolution proposed by the Belgian, French, and Italian delegations.*

The commission expresses the hope that as soon as it may be possible an agreement will be arrived at between the high contracting parties with a view to endowing the international labor conference under the auspices of the League of Nations with power to take, under conditions to be determined, resolutions possessing the force of international law.

II.—*Resolution proposed by the Belgian, French, and Italian delegations.*

The commission being of opinion that an international code of labor legislation which will be really effective can not be secured without the cooperation of all industrial countries, expresses the wish that pending the signature of the treaty of peace, which will permit all such countries to be approached, the Peace Conference will communicate the present draft convention to the neutral powers for their information before finally adopting it.

III.—*Resolution proposed by the French delegation.*

The commission considers that the very special questions concerning the minimum conditions to be accorded to seamen might be dealt with at a special meeting of the international labor conference devoted exclusively to the affairs of seamen.

## 5. CLAUSES PROPOSED FOR INSERTION IN THE TREATY OF PEACE.

The high contracting parties declare their acceptance of the following principles and engage to take all necessary steps to secure their realization in accordance with the recommendation to be made by the International Labor Conference as to their practical application:

1. In right and in fact the labor of a human being should not be treated as merchandise or an article of commerce.

2. Employers and workers should be allowed the right of association for all lawful purposes.

3. No child should be permitted to be employed in industry or commerce before the age of 14 years, in order that every child may be insured reasonable opportunities for mental and physical education.

Between the years of 14 and 18 young persons of either sex may only be employed on work which is not harmful to their physical development and on condition that the continuation of their technical or general education is insured.

4. Every worker has a right to a wage adequate to maintain a reasonable standard of life, having regard to the civilization of his time and country.

5. Equal pay should be given to women and to men for work of equal value in quantity and quality.

6. A weekly rest, including Sunday or its equivalent, for all workers.

7. Limitations of the hours of work in industry on the basis of 8 hours a day, or 48 hours a week, subject to an exception for countries in which climatic conditions, the imperfect development of industrial organization, or other special circumstances render the industrial efficiency of the workers substantially different.

The International Labor Conference will recommend a basis approximately equivalent to the above for adoption in such countries.

8. In all matters concerning their status as workers and social insurance foreign workmen lawfully admitted to any country and their families should be insured the same treatment as the nationals of that country.

9. All States should institute a system of inspection in which women should take part, in order to insure the enforcement of the laws and regulations for the protection of the workers.

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RESOLUTION AND AMENDMENTS ADOPTED BY THE PEACE CONFERENCE,  
APRIL 11, 1919.

The following statement with reference to the Barnes resolution and amendments is taken from a cable message from the American mission to the Peace Conference, dated April 16, 1919, and is subject to correction.



Mr. Barnes (British) moved the following resolution: "That the conference approve the draft convention creating a permanent organization for the promotion of the international regulation of labor conditions which has been submitted by the labor commission, with the amendment proposed by the British delegation, instruct the secretaries to request the governments concerned to nominate forthwith the representatives on the original committee at the October conference, and authorize that committee to proceed at once with its work." The foregoing resolution included approval of two amendments to article 19 of the draft convention, proposed by the British delegation with the concurrence of other delegations represented on the commission. These amendments are as follows:

(1) Additional protocol to article 19: "In framing an act, recommendation, or draft of a convention of general application, the conference shall have due regard to those countries in which climatic conditions, the imperfect development of industrial organization, or other special circumstances make industrial conditions substantially different, and shall suggest modifications, if any, which it considers may be required to meet the case of such countries."

(2) Article 19, fourth paragraph, after the words "meeting of the conference," insert the following words: "or if it is impossible owing to exceptional circumstances to do so within the period of one year, then at the earliest possible moment and in no case later than 18 months from the end of the meeting of the conference."

Mr. De Bustamante (Cuba) accepted the Barnes proposal with reservation in regard to article 37 which includes propositions incompatible with the Cuban constitution. Similar action was taken by Montes (Bolivia), Dorn Y Alsua (Ecuador), and Burgos (Panama). Sir Robert Borden moved that the conference authorize the drafting committee to make such amendments as may be necessary to have the convention conform to the covenant of the League of Nations in the character of its membership and in the method of adherence, which motion, together with the Barnes resolution, was adopted.

The above given amendments were explained by a statement supporting them as follows: (1) Additional protocol to article 19: "This protocol is proposed in view of the representations which have been made since the commission submitted its report. Its object is to make clear that it would be the duty of the labor conference to take into consideration the special circumstances of those countries where owing to climatic conditions or other causes the industrial conditions are substantially different from those of the industrial countries of Europe and America. The habits of the workers in oriental countries, the fact that industries in some countries are still largely carried

on as home industries and the development of the factory system is still in its early stages, and so forth, are matters which make absolute uniformity in labor legislation impossible and must be allowed for in the framing of conventions." (2) Article 19: "This alteration is proposed in order to meet the technical difficulty which will occasionally arise when there is no sitting of the national legislature to deal with a draft convention within the prescribed period of one year."

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LABOR CLAUSES ADOPTED BY THE PEACE CONFERENCE, APRIL 28, 1919.

The following clauses proposed by the Commission on International Labor Legislation and in revised form as presented by Sir Robert Borden for insertion in the Treaty of Peace were adopted by the Peace Conference in Plenary Session yesterday:

"The High Contracting Parties, recognizing that the well being, physical, moral, and intellectual, of industrial wage earners is of supreme international importance, have framed a permanent machinery associated with that of the League of Nations to further this great end. They recognize that difference of climate, habits, and customs of economic opportunity and industrial tradition make strict uniformity in the conditions of labor difficult of immediate attainment. But, holding as they do, that labor should not be regarded merely as an article of commerce, they think that there are methods and principles for the ratification of labor conditions which all industrial communities should endeavor to apply so far as their special circumstances will permit.

"Among these methods and principles, the following seem to the High Contracting Parties to be of special and urgent importance:

"First. The guiding principle above enunciated that labor should not be regarded merely as a commodity or article of commerce.

"Second. The right of association for all lawful purposes by the employed as well as by the employers.

"Third. The payment to the employed of a wage adequate to maintain a reasonable standard of life as this is understood in their time and country.

"Fourth. The adoption of an eight hours day or a forty-eight hours week as the standard to be aimed at where it has not already been obtained.

"Fifth. The adoption of a weekly rest of at least twenty-four hours which should include Sunday whenever practicable.

"Sixth. The abolition of child labor and the imposition of such limitations on the labor of young persons as shall permit the continuation of their education and assure their proper physical development.

"Seventh. The principle that men and women should receive equal remuneration for work of equal value.

"Eighth. The standard set by law in each country with respect to the conditions of labor should have due regard to the equitable economic treatment of all workers lawfully resident therein.

"Ninth. Each State should make provision for a system of inspection in which women should take part in order to insure the enforcement of the laws and regulations for the protection of the employed.

"Without claiming that these methods and principles are either complete or final, the High Contracting Parties are of opinion that they are well fitted to guide the policy of the League of Nations and that if adopted by the industrial communities who are members of League and safeguarded in practice by an adequate system of such inspection, they will confer lasting benefits upon the wage earner of the world."



## LESSONS FROM HOUSING DEVELOPMENTS OF THE UNITED STATES HOUSING CORPORATION.

BY FREDERICK LAW OLMSTED, MANAGER, TOWN PLANNING DIVISION, UNITED STATES HOUSING CORPORATION.

While the Bureau of Industrial Housing and Transportation of the Department of Labor was created to meet a war-time emergency, it should be understood that that emergency developed from acute local situations which even in peace times were becoming widespread and were steadily growing worse. These local conditions and the resulting general situation as to housing demand serious consideration and must hereafter be faced and treated by methods more widely applicable to the nature of American institutions than the arbitrary measures of local relief adopted under the pressure of war.

Inability of many war industries to obtain sufficient workers because of lack of housing facilities within easy access of the factory, and the consequent failure to achieve the maximum of production constituted the emergency to which reference has been made. This housing shortage was at bottom an absolute shortage in the quantity of housing accommodation, although the quality of the housing was soon found to be intimately involved in the quantity shortage.

Under the pressure of appeals to patriotism and of high pay, a given amount of housing was early in the war made to shelter a much larger number of workers than usual. It seemed a simple matter, for example, to double and quadruple the number of beds in a room. By having three men use the same bed in successive eight-hour shifts some workingmen's lodging houses provided an extraordinary quantity of housing. Boarders and roomers were crowded into private houses, families doubled up, and rooms and houses too miserable and insanitary to find tenants in ordinary times were forced into use. Thus, irrespective of any new house construction, there was provided, almost parallel with the sudden increase in manufacturing capacity which came from enlargement of plant facilities and from running two or three shifts, an increase in housing facilities, but at a heavy social price.

This implied a considerable reduction in the average quality of housing, already very bad in many places, and immediately resulted in a marked lowering of the average of efficiency of the increased labor supply and a consequent failure of the production vitally necessary.

Increased pay and fervid appeals to patriotism brought many highly skilled and self-respecting workers to the jobs. These men—usually married men, with families—found conditions so intolerable that they would soon throw up their jobs and shift, hoping to find other jobs under less outrageous living conditions.

The labor turnover rose to startling proportions. Examples of excessive labor turnover were supplied by the war industries of practically every city in which the Housing Corporation investigated conditions in housing of labor. Though unsuitable or inadequate housing was not the sole cause of this excessive labor turnover, it is mentioned by employment managers of corporations in many instances as the chief cause and in others as a contributing cause.

The constant training of new employees produced a great reduction in the average of efficiency. Despite unprecedented wages, with a corresponding rapidly increasing unit cost of production, a point was soon reached beyond which there could not occur any further effective increase of the labor force. No urge of patriotism or high wages could compensate for the overloaded accommodations for individual and family life. Inadequate access not only to sleeping places but to food, merchandise, recreation, and everything relating to family and social life outside of working hours, put a limit on production far below the maximum capacity of the increased plants.

#### HOUSING AND PLANT INVESTMENT.

These conditions forced attention to the fundamental fact that the necessary industrial plant investment, including the housing of machinery and of the workers during working hours, is relatively small as compared with the investment required properly to house and keep in working efficiency the workers and their families outside of working hours.

Stimulated by war prices, or by direct capital advancement by the Government as a war necessity, plant investment was readily and rapidly increased. The far greater investment necessary for a corresponding expansion of living quarters for the workers failed to materialize, for many reasons. Even under normal conditions this greater investment tends to lag behind industrial expansion. As a business proposition it depends on the prospect of financial returns, under the law of supply and demand. In the supply of houses, which tends to fix the scale of rents and of house prices, the amount of existing housing bulks very much larger in relation to the possible annual production of new houses than does, for example, the stock on hand of any ordinary merchandise in relation to the annual production of such merchandise. New investments in houses built on a rising market must, consequently, compete with existing houses, dis-

advantageously dividing with them any increase in prevailing rental and purchase rates. Seldom is the investment in new houses returned to the investor save after a long period of years. The enormous war increase in demand offered no proportionate inducement to the investor because it was obviously not a permanent demand.

Since 1914 the rapidly increasing cost of house construction and the diversion of capital into channels of more profitable return have resulted, even in the face of an increasing need for houses, in a steady decline in the number of houses actually built. The American Contractor gives the total investment in residential building in the eastern, central, and northern sections of this country (representing 69 per cent of the total population) as \$432,337,000 for the year 1916, and only \$252,000,000 for 1918.

It became clearly apparent in the summer of 1917 that this part of the failure to produce needed war supplies had become a matter of Government concern. Only such methods of arbitrary stimulation as were already producing notable results in expanding manufacturing capacity could make that capacity effective by supplying the requisite housing facilities.

In one set of cases the problem was so clearly unescapable that there was but little hesitation in meeting it. These were the cases of new industrial establishments created at the order of the Government for the sole purpose of producing munitions. They included powder plants, loading plants, and the like, established for reasons of public safety in isolated locations where nothing before existed. Here, quite obviously, the entire facilities for housing employees and for providing some approximation to community life had to be created along with the plant itself. It is interesting to note that even with the temporary class of structures appropriate for these short-lived communities, and even with the use of a large proportion of dormitories for single men and women willing to live apart from family life while temporarily engaged in war work, the investment in housing facilities rose to large proportions in comparison with the cost of the industrial plant itself.

Much more usually, the war-stimulated industries formed a part of permanent communities. In these the prewar housing shortage became unendurably aggravated. The problem was complicated with the gradually failing normal process of building and marketing houses and their accessories in accordance with the law of supply and demand. Very few people recognized either the gravity or the enormous size of the housing problem as compared with the more obvious problem of expanding manufacturing facilities. When the need was recognized, the difficulty of balancing ultimate economic gains and losses against the necessary speed of construction, the greatly en-



hanced cost, and the reservation to war needs of every productive power of the country, brought about a long and very costly period of hesitation.

Indeed, it was obviously beyond the physical powers of the country, in the stress of the urgent demand for everything directly relating to war necessities, to create promptly an adequate expansion of housing facilities in proportion to the localized expansion of manufacturing capacity and demand for labor. It may be that if hostilities had not come to an end when they did, the attempt to carry through the greatly increased program of military effort and production adopted in 1918 might have proved that the country had "bitten off more than it could chew." It is not unlikely that it would have been necessary to curtail or postpone the war production program at many points in order first to provide housing for the workers needed for the increased output of war materials, upon which the whole program was based.

#### CONGRESSIONAL ACTION.

A tardy and incomplete recognition of the fundamental nature of the housing problem in its relation to successful war production occurred on March 1, 1918. On this date Congress authorized the expenditure of \$50,000,000 by the United States Shipping Board for accelerating the production of housing facilities in connection with shipyards. This was a mere drop in the bucket compared with the investment in shipbuilding plants. Another step was taken when Congress authorized the President, on May 16, 1918, to apply \$60,000,000 "for the purposes of providing housing, local transportation, and other general community utilities for such industrial workers as are engaged in arsenals and navy yards of the United States and industries connected with and essential to the national defense, and their families \* \* \* only during the continuation of the existing war," and on June 4 provided the necessary appropriation. On July 8, 1918, this amount was increased to \$100,000,000.

#### UNITED STATES HOUSING CORPORATION.

By Executive order, confirmed in the act of June 4, 1918, the Bureau of Industrial Housing and Transportation was created in the Department of Labor to serve these ends, and the funds were expended by it through the United States Housing Corporation, legally created July 9, 1918.

The first effort was, through the establishment of the homes registration service, to discover and use to the utmost capacity the existing housing facilities in every community where the lack of such facilities was retarding the production of war materials. A further effort was for the improvement of transportation facilities, by better service



and by extension of trackage, to increase the number of existing houses available for war workers. As a last resort there was undertaken the construction of new living quarters, both in the way of temporary dormitories and of permanent houses with accessories suitable for decent family life.

The available and prospective funds were never enough to justify more house construction than would simply take the peak off the war-time shortage. Nevertheless, the building projects recognized as urgently essential by the production authorities of the Army and Navy and by the United States Housing Corporation at the time of the signing of the armistice involved an estimated expenditure of \$194,000,000, and the projects actually under way had been allotted the full limit of the appropriation of \$100,000,000 then available. As at that time reduced, the total expenditure for construction, including amounts lost on canceled projects, will not exceed \$45,000,000.

#### TEMPORARY AND PERMANENT HOUSING.

The progress of the purely temporary housing developments in connection with isolated munition plants, and the temporary dormitories at certain other points, could and did cease when the urgent necessity terminated. The bulk of new housing undertaken to stimulate production consisted of dwellings forming a part of communities likely to need an even larger amount of new house construction to meet their postwar needs. It seemed economically wise to complete so much of this permanent housing as was far advanced in construction at the signing of the armistice.

Since the new housing which could be undertaken during the stress of war fell so far short of meeting the full war-time needs, it was designed to serve those workers whom it was most essential to keep steadily on the job and whom it had proved most difficult to retain under bad living conditions. These were usually the most skilled and steady, self-respecting men, generally married men with families, the strength of American industrial life. It is these men who not only fully deserve but who demand and are normally able and willing to pay for decent and comfortable living conditions, schooling and play opportunities for their children, and all reasonable essentials of civilized life for themselves and their families.

Thus it happens that these Government housing operations, like so many of the private developments which can be studied, have dealt but little with the more difficult problem of satisfactory and economical housing for the families of unskilled and relatively low-paid workers. Within the scale of accommodations which these developments undertook to supply they are, however, very instructive.

## LESSONS OF GOVERNMENT HOUSING.

Two sorts of lessons are to be derived from the Government's emergency operations in the housing field. One sort is concerned with the physical, social, and economic qualities of the several housing projects as object lessons. They are intelligent, even if hurried, experiments on a large scale, directed toward securing the best obtainable results in the way of comfortable, healthful, pleasant living conditions for persons of limited means. These attempts will be valuable to all who may aim at similar ends. They will be helpful to the individual home builder, to the so-called speculative builder, whose business is the manufacture and sale of houses intended for those unable or unwilling to venture on building for themselves. They will also be useful to cooperative building organizations or to manufacturers or other investors who may desire to build houses on a large scale, in view of the indirect benefits which flow from satisfactory living conditions in any community. Some of the results attained by the United States Housing Corporation are here briefly suggested from this point of view, but a much fuller and more detailed discussion of them may be expected in the forthcoming official report of the corporation.<sup>1</sup>

The other sort of lessons is concerned with the social and economic conditions which have caused the general shortage of good housing so strikingly emphasized and exaggerated for a time by the war. We have here a great national problem, more acute in some places than in others, taking different forms according to local conditions, but critical throughout the length and breadth of the land. It is a problem that needs the most careful study to find the most effective means of relief, for some of its causes are obscure though some are fairly evident. On the economic and financial side it is in the aggregate enormous; while on the social side there is probably no other activity in the nation which does more to fix the conditions that determine the health and mold the character of our people than housing.

On the side of quantity of house construction, which fundamentally governs all questions of quality, it appears to be a fact that capital has for some years been more and more inclined to seek other channels of investment than housing. The individual home builder and the large operator alike have been finding it progressively more difficult to obtain mortgage loans on favorable terms as compared with the terms on which loans can be secured for other classes of investment. Rented dwellings, especially rented individual dwellings, with their many social advantages to the community as compared with tenement houses, due to the favorable conditions they offer for sound family life, have been growing less and less profitable as investments.

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<sup>1</sup> A preliminary report, principally historical, was issued Dec. 3, 1918, and was summarized in the MONTHLY LABOR REVIEW for February, 1919 (pp. 246-251).

The characteristically American impulse toward the making of a permanent home for the family in a place of its very own, while still very strong and very general, appears to be losing rather than gaining among people of small means. Especially is this true among working men, who feel the danger of being tied by home ownership to a limited choice as to their place of employment.

All of these causes, and others more obscure, doubtless lie back of the unmistakable tendency toward insufficient construction of new houses to meet the growth of population.

This growing scarcity of satisfactory housing reflects itself in overcrowding and in the enforced acceptance of unsatisfactory accommodations. There follows a lowering of the average quality of housing, with a drift on the one hand toward tenement living and on the other toward slum conditions of another sort. On the score of quality, the diminution of investment building proper, both by the individual home maker and by the investor in rental property, tends to increase the proportion of houses built to sell and not to endure. Such houses depreciate rapidly, are not in the long run a good economic investment for the country, and tend continually toward slum conditions unfavorable to that self-respecting home life upon which the security of our democracy rests.

The country must face this national problem. It must face it squarely and courageously and must patiently devise such improvements in the methods of financing the home builder, and in the prevailing mechanisms for wholesale construction of dwellings, as will correct these tendencies without dangerously revolutionary change of method. Such success as may have attended the Government's adventures in housing under the stimulus of war should have a far-reaching result in pointing the way for other agencies.

It is to other agencies rather than to a peace-time extension of the building activities of the United States Housing Corporation that the writer looks for relief. A governmental building organization in peace times could hardly be expected to attain the exceptionally high standard of personnel and of devotion to the work in hand which was secured in the war-time organization under the inspiration of war service, and would be subject to many of the administrative difficulties under which the war work suffered. This is all the more a reason, on the one hand, for making the best use of lessons learned, and on the other hand, for recognizing the difficulties in the way of any proposition looking toward direct participation by the Government in the building of houses in peace time.

The country must come to recognize the house problem as a national problem of the most vital importance to the security of our democracy. The country, too, must come to understand that it takes



a great deal more money to house the workers outside the factory than to shelter and work them inside the factory. Some satisfactory solution of the problem must be found and will be found as its importance is realized. It is not impossible that in some way parallel to the operation of the Federal Farm Loan Act financial support may be offered which will stimulate individual and collective housing extension, while at the same time utilizing to some extent the expensively acquired information and experience of war time. But the most immediate need, if the results of the war-time housing experience are to be salvaged and made the basis for further advance, is the establishment of a continuing Government agency for research and as a clearing house of information on matters of housing and community planning.

#### TYPES OF HOUSES.

This brief article can give only the most inadequate idea of the sort of houses and of residential neighborhoods which the United States Housing Corporation has been creating, to say nothing of the still larger range of housing the construction of which was stopped on the signing of the armistice, but the plans of which are all available.

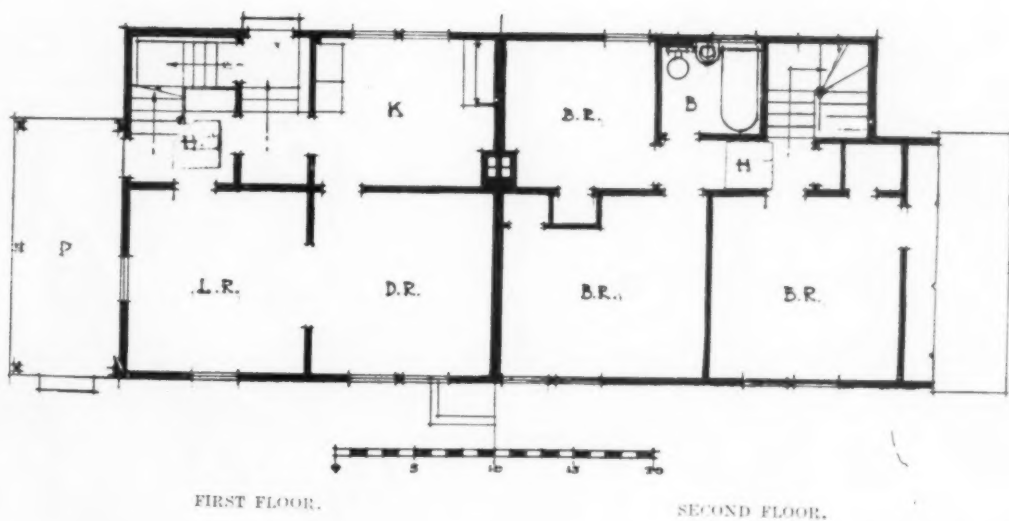
Taking a few examples almost at random, the first illustration is that of a pair of semidetached five-room houses in a development at Waterbury, Conn. The development comprises five and six room houses, both detached and semidetached, housing 55 families.

The plan is very economical not only in the utilization of space within a simple rectangular outline but also in the method of framing, with its continuous longitudinal partition in both stories, in the central chimney, and in the basement stair arrangement, giving outside access to the cellar without an area. The simple wall and roof treatment and the skillful placing of the windows make a building not only very attractive in itself but also of special value in a series of small houses.

The site covers 18 acres of comparatively rough bouldery land in the southerly outskirts of the city, the most accessible and available area of sufficient size. The portion actually used for the development, as curtailed at the time of the armistice, comprises  $8\frac{2}{3}$  acres, divided into lots about 110 feet deep and 40 to 50 feet wide, giving a space between houses along the street of 15 to 30 feet, and a density of about 7.5 families per acre, gross (including streets).

All the houses are of frame construction, stuccoed. All the five-room houses are practically on the same plan as illustrated, and all the six-room houses are on one plan. Both are varied by differences in the location of the porches and in the roof treatment, as well as by their use in the detached as well as in the semidetached form, with corresponding variations in window placing. With judicious modifications in the set-back of the houses from the street, with the





WATERBURY, CONN.  
Pair of 6-room semidetached houses.



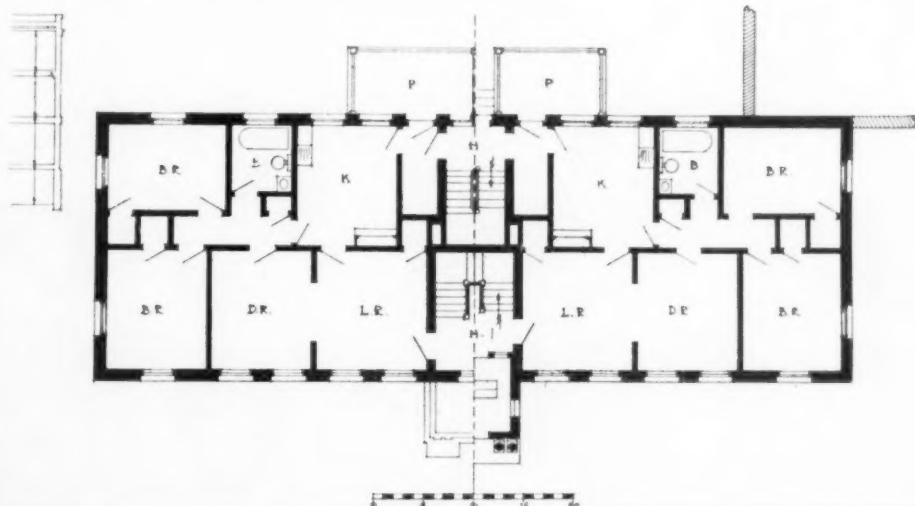
**BRIDGEPORT, CONN.**

Facing Old Mill Green. Six-room detached house; pair of 5-room semidetached two-family houses of 5-room flats.



**BRIDGEPORT, CONN.**

Black Rock Apartment House Group. Five-room apartment unit, type G3.

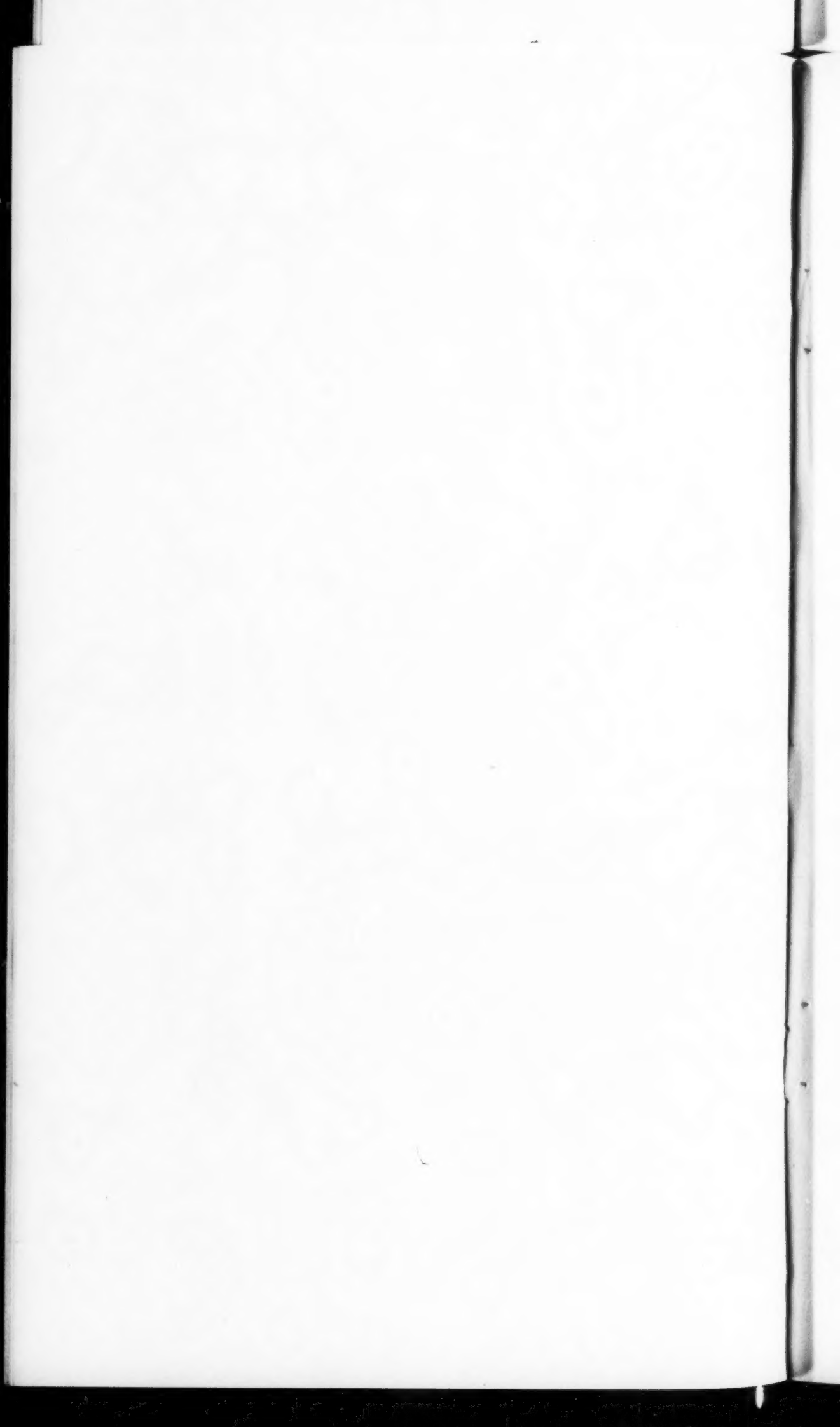


SECOND-FLOOR PLAN.

FIRST-FLOOR PLAN.

BRIDGEPORT, CONN.

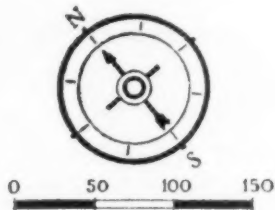
Black Rock Apartment House Group. Five-room apartment unit, type G3.





# HOUSING PROJECT MILL GREEN, BRIDGEPORT

U.S. DEPARTMENT OF LABOR  
BUREAU OF INDUSTRIAL HOUSING & TRANSPORTATION  
U.S. HOUSING CORPORATION

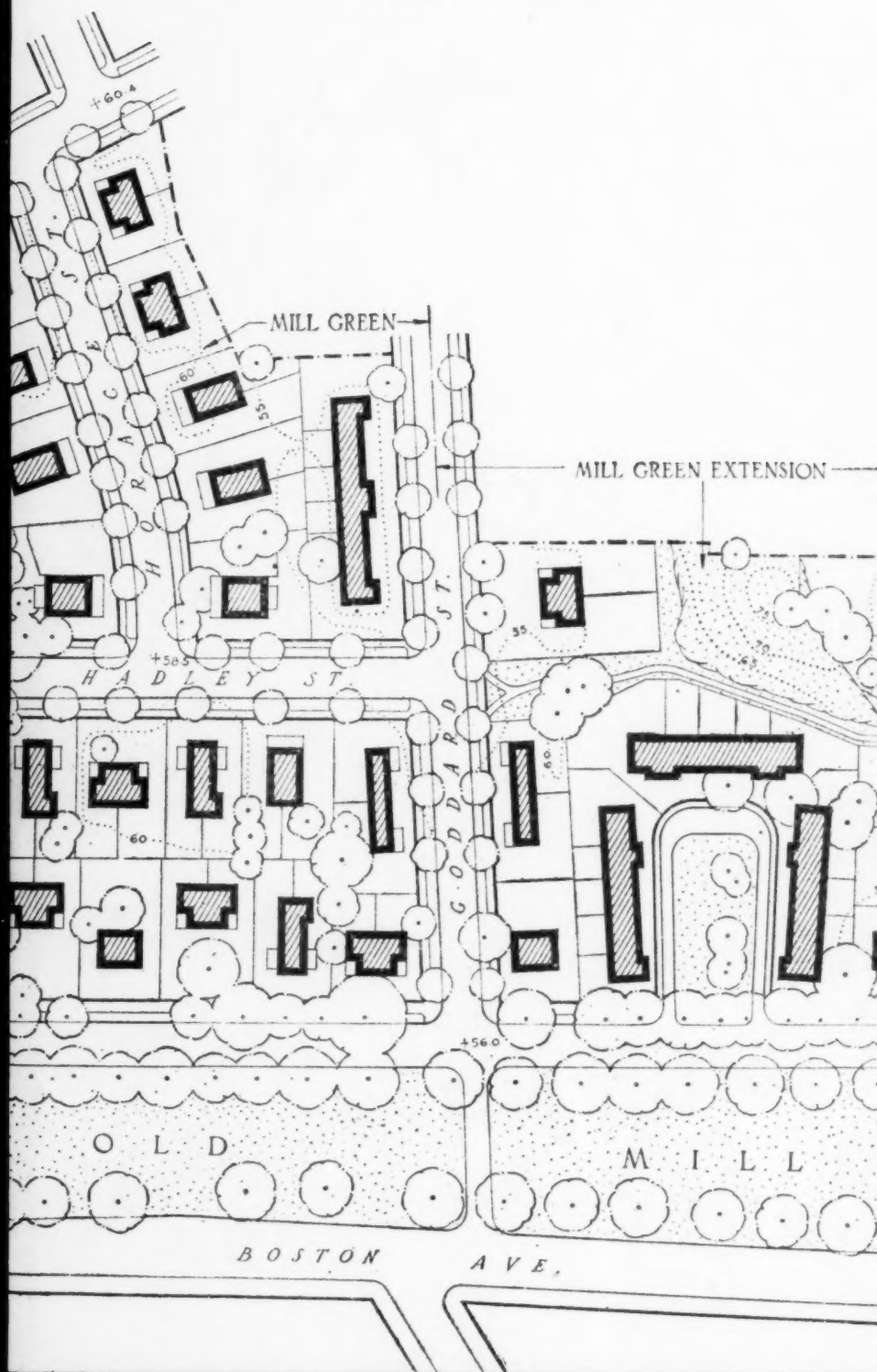


**LEGEND**  
 [Hatched rectangle] CONTOURS 5-FT. INT.  
 [Dotted rectangle] PARKS & OPEN SPACES  
 [Circle with cross] EXISTING TREES



# HOUSING PROJECT MILL GREEN, BRIDGEPORT, CONN

U.S. DEPARTMENT OF LABOR  
BUREAU OF INDUSTRIAL HOUSING & TRANSPORTATION  
U.S. HOUSING CORPORATION



CONN  
TION

ENSION

L

MILL GREEN CEMETERY EXTENSION

+57.0

A S Y L U M

P L Y M O U T H S T.

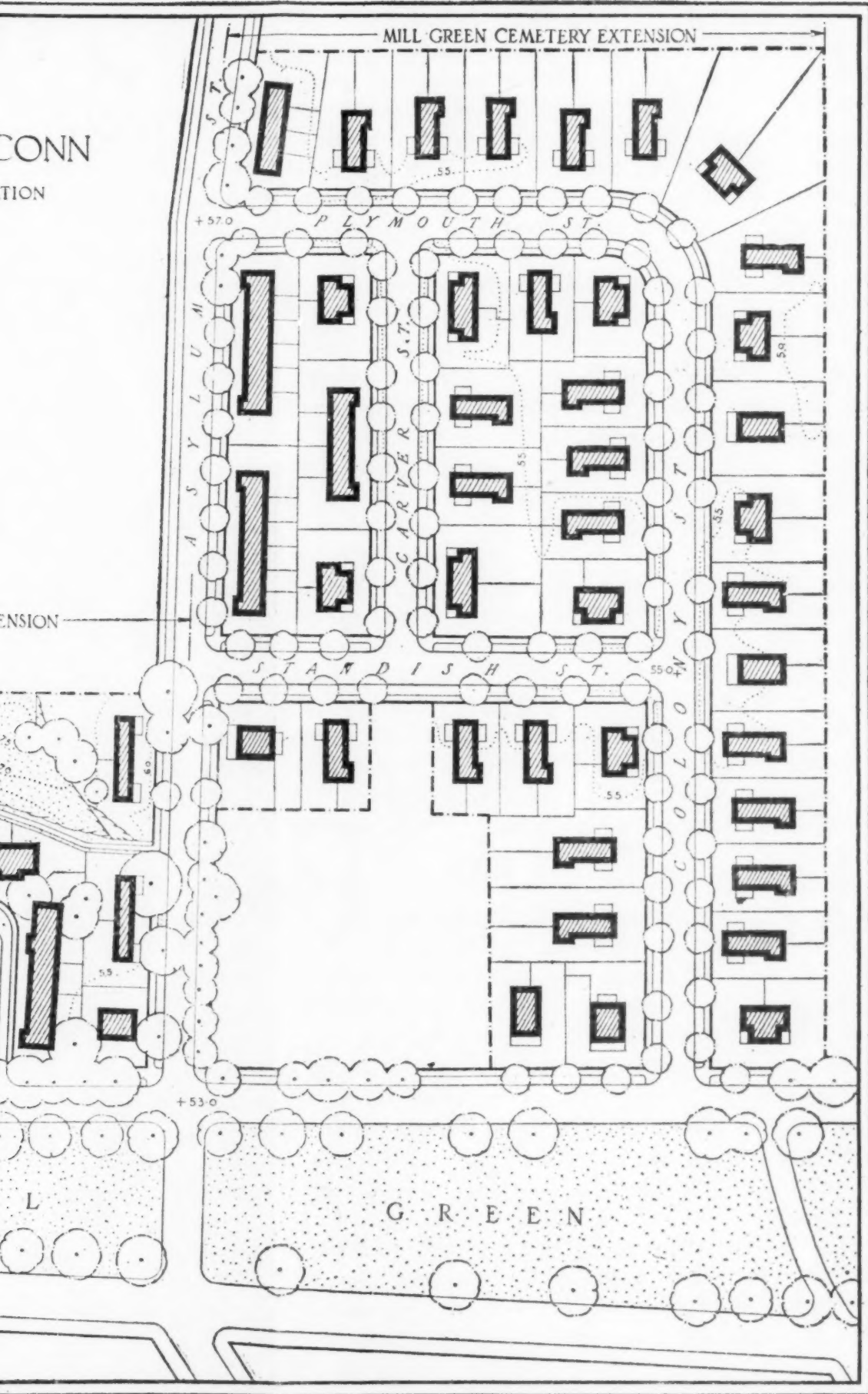
C A R V E R S T.

S T A N D I S H S T.

W O L C O T T S T.

+53.0

G R E E N







natural irregularity of slope in the site, and with slight bends in some of the streets, there is such a happy avoidance of monotony and regularity of appearance that it is hard to realize that only two house plans are used in the entire development. And the adherence throughout to one material—stucco—for outside walls, to one material for roofing, and to one good set of simple details gives an architectural harmony to this varied arrangement which is thoroughly pleasing.

The project at Old Mill Green, Bridgeport, is shown in general plan and by a half tone of three of the types of houses. The land was irregular in outline and in the portion marked "Mill Green Extension" was broken by large ledges. There were numerous existing trees, and the land bordered on an old public common and was crossed by two old streets. The houses are mainly semidetached and two-flat houses with a few short rows of four-room houses, giving an average density of 10.3 families per acre, gross. The resulting general plan is irregular, offering some very interesting compositions. In the middle of the plan is one of the very few cases in which houses were built about three sides of a recessed court. The special economic justification for this court is the existence of the ledges in the rear which made it unprofitable to open a street from Goddard Avenue to Asylum Street, parallel with Mill Green, and build on the rear portion of the property. This ledgy ground is made into a local park in the interior of the block. The skillfully straightforward architecture of these buildings, all of simple outline with plain brick walls and uncomplicated slate roofs, produces some of the most attractive results to be found in any of the projects of the Housing Corporation.

Bridgeport also presents two excellent examples of apartment-house groups, among the few instances where high land values forced the use of this type of housing. The normal unit of construction, illustrated in plan, contains six apartments of five rooms each. Another closely similar unit has six 4-room apartments, and a special corner unit has six 3-room apartments. These units are grouped and combined with great ingenuity, forming pleasant interior courts of considerable size overlooked by the rear porches. For service these interior courts are reached by roadways, and in one case a good-sized playground is provided in the court. The Black Rock group here illustrated houses 216 families, with a density of 31.9 families per acre, gross; the other group houses 108 families, with a density of 35.8 per acre, gross. While these are higher densities than are generally produced by the too familiar "three-decker" development of New England cities, they give far better light, air, privacy, and convenience, to say nothing of the vastly better appearance and the freedom from rapid deterioration.

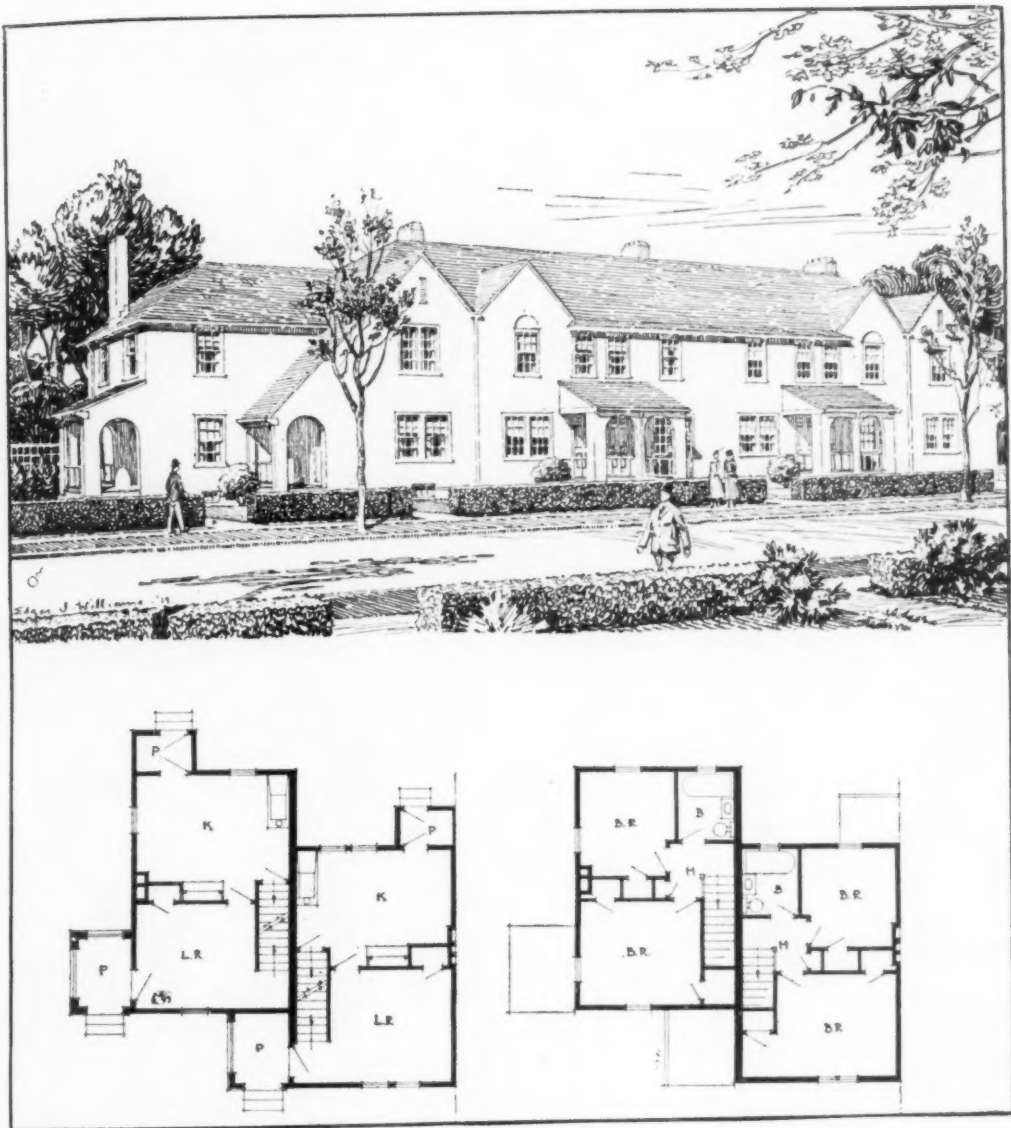
## ARCHITECTURAL AND TOWN PLANNING FEATURES.

The speed with which the erection of all buildings had to be pushed ruled out experiments in new methods of construction, however promising of economies or even of possible increased speed. It was necessary to use only those materials obtainable quickly and certainly in the necessary quantities and the methods of construction so well tried and familiar as to minimize the chance of unforeseen delays. Thus there is little new to be learned from the projects on the side of construction, except in choices of detail as between well-known alternatives. Some economies of detail forced by the war-time shortage of materials would be inexpedient for peace-time work; others, such as, notably, the simplifications of plumbing, are permanently desirable.

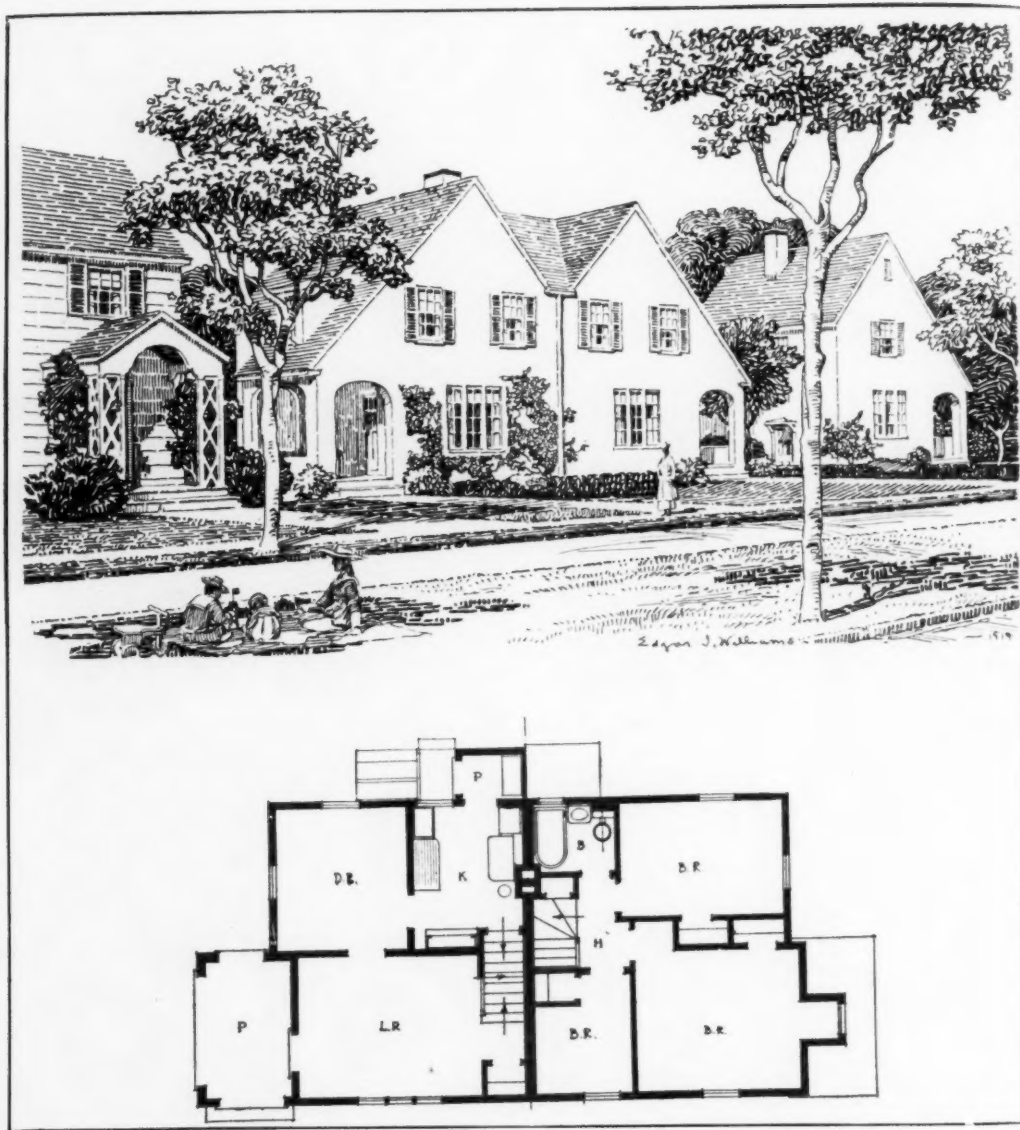
With regard to the general designs of the houses and of the towns or residential neighborhoods created in building them, there was a somewhat greater latitude for inventive ability; but even here the speed and the large scale of the operations required a conservative attitude, with a strong presumption in favor of types of plan so well tested by experience as to give assurance that all their drawbacks could be known in advance and could be either overcome or deliberately accepted as a fair price to pay for their known advantages.

If time had permitted the deliberate study of promising inventions of a more radical sort in respect to plans of arrangement and methods of construction it would have been reasonable to expect notable improvements in the "state of the art," from concentrating upon the scrutiny of such inventions the great range of technical skill and practical experience that was gathered in the service of the Housing Corporation, which included men of many types of mind in each of the fields of architecture, landscape architecture, engineering, contracting, real-estate operations, finance, management of labor, and social work. And although the staff of the Housing Corporation resolutely limited its work to what would produce reasonably satisfactory results for the relief of the war industries in the quickest possible time, its members came to feel very strongly that after the war a permanent Government agency ought to be set up which could make such thorough and deliberate studies both of alternative customary types of plan and materials and of promising new types, and make the results of such comparisons available for the whole country.

Even under conditions as they were the Housing Corporation assembled and compared and analyzed many types of more or less acceptable plans, both of houses and of town layouts, and will be able to make available to the public in its final report many of these comparisons and selections, covering a large variety of plans based on a few widely used types and a few plans which are, if more experi-



DAYTON, OHIO.  
Four-room row houses, type IIS.



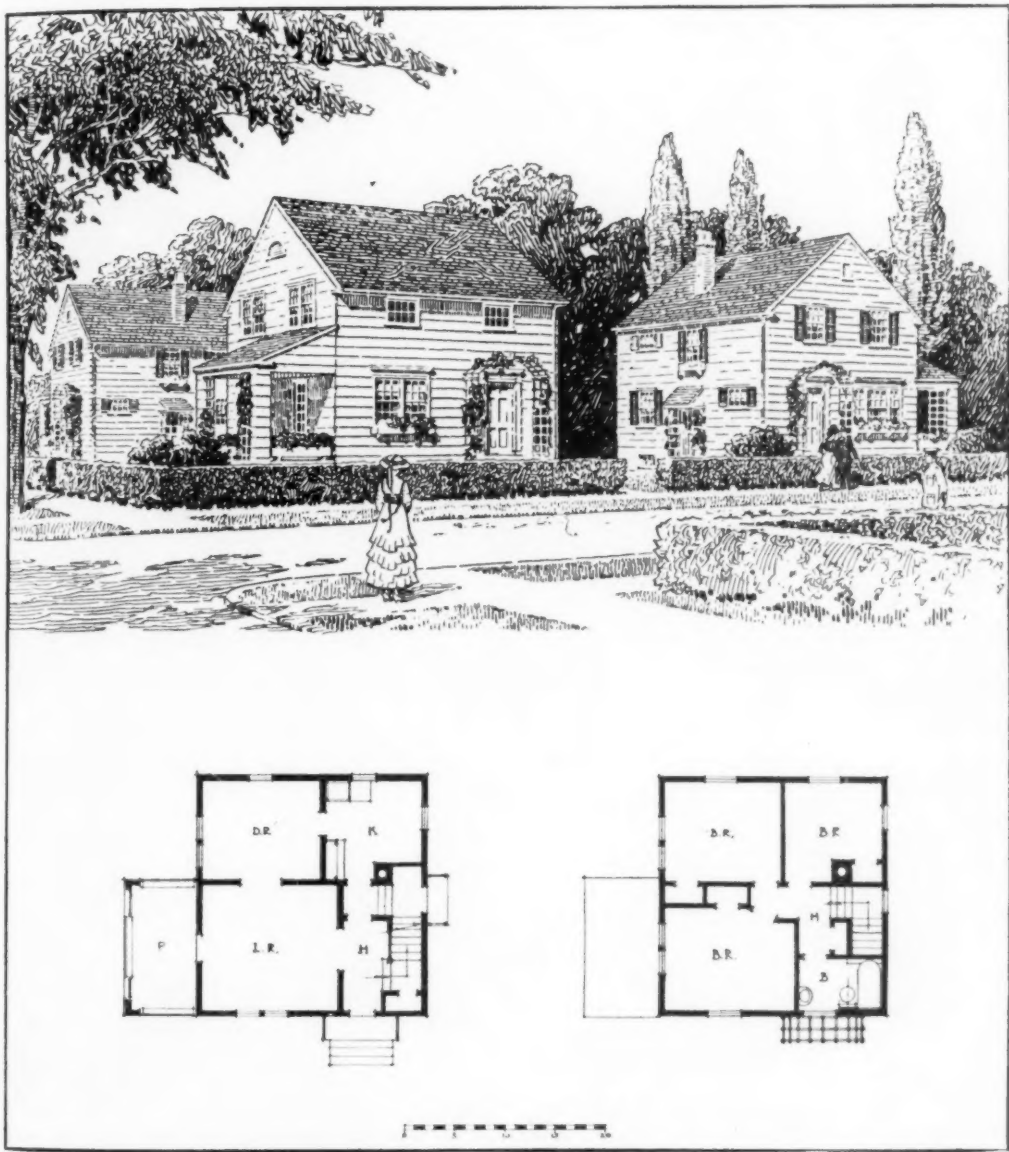
FIRST FLOOR.

SECOND FLOOR.

ILION, N. Y.

Six-room semidetached house, type C2.



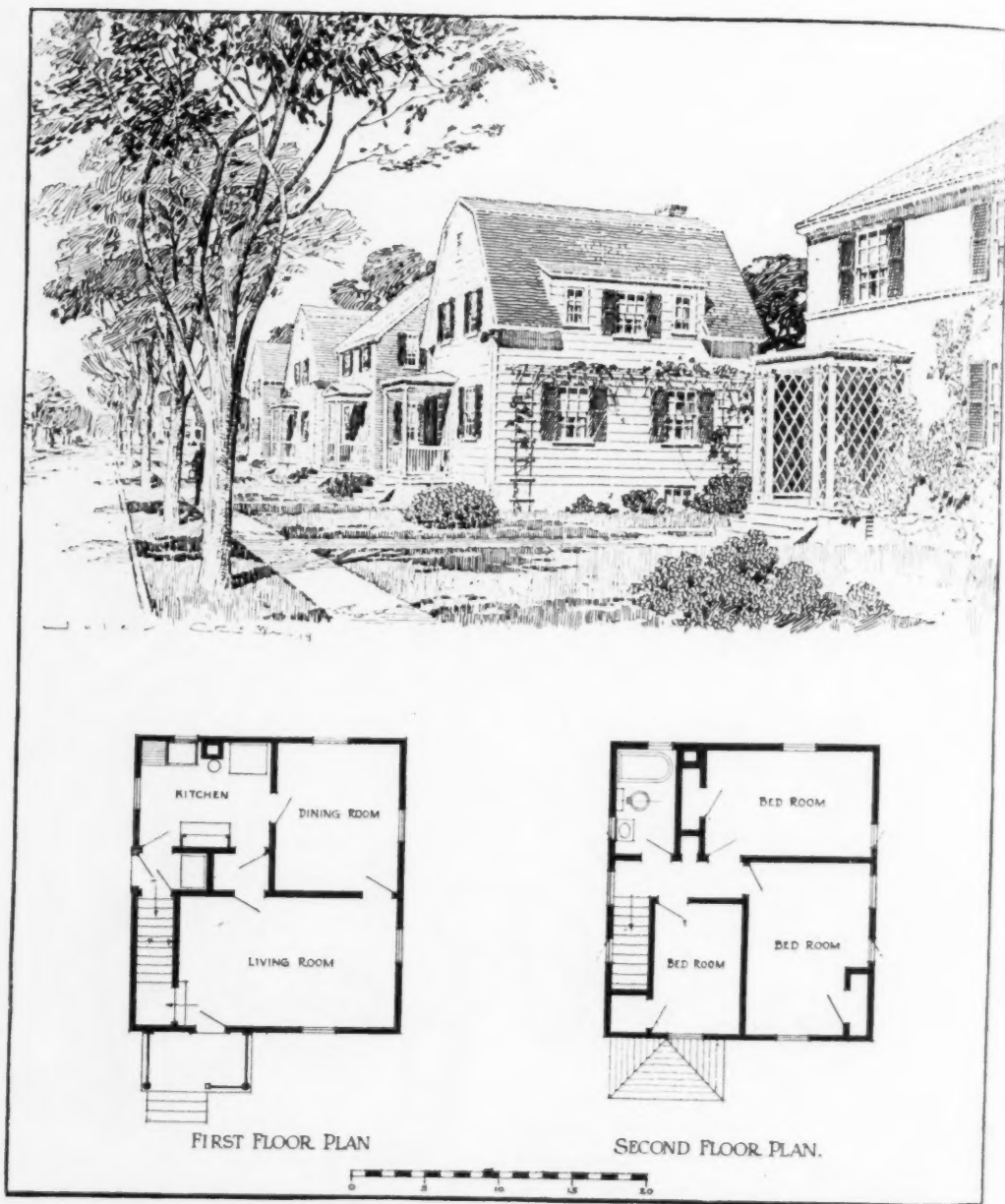


FIRST FLOOR.

SECOND FLOOR.

WATERTOWN, N. Y.

Six-room detached house, type 3A.



ABERDEEN, MD.  
Six-room detached house, type E.

mental, at least so promising as to have led to their limited use even under the stress of war-time conditions.

On the score of architectural appearance there are lessons to be learned from the work of the Housing Corporation, both positive and negative, concerning the means by which small houses may be made beautiful consistently with economy of construction and convenience of use; but perhaps the most striking lessons in this respect concern the location of the houses and the general town planning. When long lines of houses on long, straight streets are imposed by an existing rectangular street plan, the houses being small and close together by force of economy, hardly any architectural skill can produce a thoroughly agreeable result, even by resort to grouping and to such variations in set-back as are normally acceptable to the occupants. The experience of the corporation has merely confirmed in this respect a generally accepted opinion of town planners that in residential developments, especially for small houses, comparatively short street vistas in proper scale with the houses are extremely important, whether secured by absolute discontinuity of the minor streets or by moderate curves or angles in them; and that such departures from the theoretical economy of the rectangular plan need not involve, if well designed, an appreciably greater cost per house for streets, utilities, and land.

Another general point as to house arrangement has been borne out by the experience of the Housing Corporation. It is possible to unify and formalize a scheme by making the houses so rigidly related and balanced along the street and across the street that the whole development looks unpleasantly like a charitable or penal institution. It is also possible by too much seeking of variety and picturesque quality in the color and shape and arrangement of the buildings to make the development look like a piece of stage scenery and not like the dwellings of modern American citizens.

It is a fact, however, that if the whole development is treated as a business proposition, considering all the aspects of site and street plan and utilities and houses, taking into account the fair money value of good appearance in detail and in arrangement, and weighing value and cost in each case, the very reasonableness of the result will go far to make it pleasing to look at as well as inexpensive to build and to operate.

How far the Housing Corporation has succeeded in all these regards in the developments which it now has under way, and how far its canceled projects would have succeeded if they had been constructed, is still a matter of opinion.

The forthcoming report of the Housing Corporation, however, will give anyone interested in the larger aspects of town planning, as

well as anyone interested more particularly in houses, an opportunity to study these matters for himself to good advantage, because the corporation sets forth on about 100 projects not only what arrangement and appearance were intended but what the design entailed in each case in the way of architectural, engineering, and landscape construction and consequent cost. This data, tabulated for ready comparison, should be of great value to anyone undertaking problems, large or small, similar to those which the corporation has faced.



# MEDICAL BENEFITS AND THE MEDICAL PROFESSION UNDER WORKMEN'S COMPENSATION LAWS.

BY CARL HOOKSTADT.

## STATUTORY PROVISIONS.

Of the 42 workmen's compensation laws in effect in the United States on January 1, 1919, only 5 (California, Connecticut, Idaho, Porto Rico, and the Federal Government) place no limitation except reasonableness upon the amount of medical treatment which the employer must furnish in cases of industrial accident. All of the other laws limit the employer's liability either as to length of time or amount, or both. The following table shows the States classified as to length of time and maximum amount of medical service for which the employer is liable:

COMPENSATION STATES, CLASSIFIED BY LENGTH OF TIME DURING WHICH MEDICAL SERVICE IS FURNISHED, AND MAXIMUM AMOUNTS.

None.	2 weeks.	3 weeks.	4 weeks.	30 days.	8 weeks.	60 days.	90 days.	Unlimited as to time.
Alaska	Del. (\$25).	Mich.....	Iowa (\$100)..	Colo. (\$100)	Ill. (\$200)	N. Y.	Ky. (\$100)..	Calif.
Ariz...	Me. (\$30) ..	Nebr. (\$200)	R. I.....	Ind.....	Kans. <sup>1</sup> (\$150)	.....	Minn. (\$100)	Conn.
N. H.	Mass. <sup>1</sup> .....	N. Mex. (\$50)	S. Dak. (\$100)	Va.....	.....	.....	Nev. <sup>1</sup> .....	H a w a i i
Wyo..	Mont. (\$50)	.....	.....	.....	.....	.....	Wis. <sup>1</sup> .....	( \$150 ).
.....	N. J. (\$50)	.....	.....	.....	.....	.....	.....	Idaho.
.....	Okla. <sup>2</sup> .....	.....	.....	.....	.....	.....	.....	La. (\$150).
.....	Pa. (\$25) ..	.....	.....	.....	.....	.....	.....	Md. (\$150).
.....	Tex. <sup>4</sup> .....	.....	.....	.....	.....	.....	.....	Ohio (\$200). <sup>5</sup>
.....	Vt. (\$100) ..	.....	.....	.....	.....	.....	.....	Oreg. (\$250).
.....	.....	.....	.....	.....	.....	.....	.....	P. R. <sup>6</sup>
.....	.....	.....	.....	.....	.....	.....	.....	Utah (\$200) <sup>7</sup>
.....	.....	.....	.....	.....	.....	.....	.....	Wash. <sup>8</sup>
.....	.....	.....	.....	.....	.....	.....	.....	W. Va. (\$150)

<sup>1</sup> Longer period under certain conditions.

<sup>2</sup> 50 days.

<sup>3</sup> 15 days.

<sup>4</sup> 2 weeks additional in hospital cases.

<sup>5</sup> Except in unusual cases.

<sup>6</sup> Necessary medical attendance as prescribed by commission.

<sup>7</sup> Such medical service as employer or insurer may deem proper.

<sup>8</sup> Medical service furnished during disability. Employees must contribute one-half.

It will be noted that 4 States <sup>1</sup> do not provide for medical service in the real acceptance of the term. Three of these 4 States <sup>2</sup> provide that in fatal cases involving no dependents the medical expenses of the last sickness shall be paid by the employer.

The following table gives in more detail the amount of medical aid and the conditions under which it is furnished. It will be noted that many States, in addition to the time limitation, also limit the amount, ranging from \$25 in Delaware and Pennsylvania to \$250 in Oregon. Others allow additional medical service in certain cases, at the discretion of the commission or court.

<sup>1</sup> Alaska, Arizona, New Hampshire, and Wyoming.

<sup>2</sup> Alaska, Arizona, and New Hampshire.

## AMOUNT OF AND CONDITIONS FOR MEDICAL SERVICE UNDER COMPENSATION LAWS.

State.	Medical and surgical aid.	
	Period.	Maximum amount and other qualifications.
Alaska.....		Only in death cases involving no dependents; maximum \$150 for medical expenses between injury and death.
Ariz.....		Reasonable medical and burial expenses in death cases involving no dependents.
Calif.....	Unlimited.....	Such service as reasonably required.
Colo.....	30 days.....	Maximum \$100 unless there is a hospital fund. Special operating fee of \$50 in case of hernia.
Conn.....	Unlimited.....	Such service as deemed reasonable by attending physician. Special provision for seamen on United States vessels.
Del.....	2 weeks.....	If requested by employee or ordered by board; maximum \$25.
Hawaii.....		Maximum \$150.
Idaho.....	Unlimited.....	Reasonable service for reasonable period. Hospital benefit fund may be permitted in lieu of statutory provision.
Ill.....	8 weeks.....	Maximum \$200.
Ind.....	30 days.....	Such service as deemed necessary by attending physician or board; longer at option of employer. Employee must accept unless otherwise ordered by board.
Iowa.....	4 weeks.....	Maximum \$100. If requested by employee, court, or commissioner.
Kans.....	50 days.....	If demanded by employee; maximum \$150.
Ky.....	90 days.....	Unless board fixes other period. Maximum \$100, or \$200 for hernia operations.
La.....		Reasonable services unless employee refuses to accept; maximum \$150.
Mo.....	2 weeks.....	Maximum \$30, except for major surgical operations.
Md.....		Such service as may be required by commission; maximum \$150.
Mass.....	2 weeks.....	Longer in unusual cases at discretion of board.
Mich.....	3 weeks.....	
Minn.....	90 days.....	Maximum \$100; court may allow additional treatment, not over \$200, if need is shown within 100 days of injury.
Mont.....	2 weeks.....	Unless employee refuses; maximum \$50 unless there is a hospital fund; special operating fee of \$50 in case of hernia.
Nebr.....	21 days.....	Unless employee refuses; maximum \$200; no time limit in case of major operations; employer not liable for aggravation of injury if employee refuses to accept.
Nev.....	90 days.....	Time may be extended to 1 year by commission; transportation furnished.
N. H.....		Medical service and burial expenses in death cases involving no dependents; maximum \$100.
N. J.....	2 weeks.....	Unless employee refuses such treatment; maximum \$50.
N. Mex.....	3 weeks.....	Maximum \$50, unless there is a hospital fund; special operating fee of \$50 in case of hernia.
N. Y.....	60 days.....	Such service as may be required or requested by employee.
Ohio.....		Such service as commission deems proper; maximum \$200, except in unusual cases.
Okla.....	15 days.....	
Oreg.....		Includes transportation; maximum \$250.
Pa.....	14 days.....	Unless employee refuses; maximum \$25, or \$75 when a major surgical operation is necessary. Employer not responsible for aggravation of injury if employee refuses.
P. R.....	Unlimited.....	Necessary medical service as prescribed by commission.
R. I.....	4 weeks.....	
S. Dak.....	4 weeks.....	Maximum \$100.
Tex.....	2 weeks.....	Two weeks additional in hospital cases.
Utah.....		Such medical and hospital services as employer or insurer may deem proper; maximum \$200; hospital benefit fund permitted in lieu of statutory provision.
Vt.....	14 days.....	Maximum \$100.
Va.....	30 days.....	Such service as deemed necessary by attending physician or commission; longer at option of employer. Employee must accept unless otherwise ordered by commission.
Wash.....	During disability.	Transportation included; employees must contribute one-half medical cost.
W. Va.....		Maximum \$150; \$300 in special cases where disability can be reduced.
Wis.....	90 days.....	Longer if disability period can be reduced.
Wyo.....	None.....	
U. S.....	Unlimited.....	Commission shall furnish necessary medical service for reasonable period unless employee refuses; transportation furnished if necessary.

## KIND OF SERVICE.

Most of the States provide that "reasonable or necessary medical, surgical, and hospital service" must be furnished, leaving the question of reasonableness or adequacy to the commissions or courts to determine. Twenty-seven States include medicines within this provision; 15<sup>1</sup> include surgical appliances and supplies; 9<sup>2</sup> include nursing; while Nevada, Oregon, Washington, and the Federal Government include transportation. In Utah, oddly enough, such medical service shall be furnished as the employer or insurer deems proper. The medical service provisions of the California and Wisconsin laws are probably the most comprehensive of all the State compensation acts in this respect. For example, the California provision, "Such medical, surgical, and hospital treatment, including nursing, medicines, medical and surgical supplies, crutches and apparatus, including artificial members, as may reasonably be required to cure and relieve from the effects of the injury," is about as inclusive as it is possible to make it.

It must not be understood, however, that the specific services just mentioned are not furnished in the States which do not specifically mention them in the law. The inclusiveness of the term depends upon the liberality of the administering body. Furthermore, employers and insurance carriers as a matter of policy often furnish additional service, including artificial limbs and other surgical appliances in order to restore the earning capacity of the employees and thereby reduce their compensation costs.

## ADEQUACY OF MEDICAL SERVICE.

Although adequate medical treatment is absolutely essential to complete rehabilitation and restoration of an injured employee's earning capacity only five laws, as already noted, require the employer to furnish unlimited medical service. Several States make no provision whatever for medical treatment, while in others the low maximum limits make adequate treatment impossible. Reference to the preceding table shows that in seven States the employer is not required to furnish medical service beyond two weeks and in less than one-half of the States is he required to provide such service for more than 30 days. Quite a number of the States, in addition to the time limits, also place a limitation upon the amount or cost of service to be provided, thus increasing the inadequacy of the laws still further. Some idea of the inadequacy of the medical service provisions may be obtained from a study of the severity of industrial

<sup>1</sup> California, Colorado, Idaho, Indiana, Iowa, Kansas, Kentucky, Maryland, Minnesota, Nevada, New York, Oklahoma, Pennsylvania, Vermont, and Wisconsin.

<sup>2</sup> California, Idaho, Kansas, Kentucky, Maryland, Nevada, New York, Ohio, and Utah.



accidents. In what percentage of accident cases does the period of disability extend beyond the statutory medical periods of the workmen's compensation acts? The disability period is not necessarily always coterminous with the medical period. The length of the disability periods will throw considerable light upon the adequacy of the medical service furnished.

The following table shows, for certain States, the percentage distribution of nonfatal industrial accidents causing disability of more than one week, classified by periods of disability. Accidents which resulted in an incapacity of one week or less were eliminated for two reasons: First, the number of minor accidents reported varies enormously among the several States, thus impairing the comparability of the accident data. For example, in California the disability in more than one-half of the total accidents reported terminated within one week, whereas in Washington less than one-fourth of the cases terminated within this period. Second, the adequacy of the medical provisions of compensation laws can best be determined from the number or percentage of the serious accidents affected by the statutory limitations placed upon the medical service to be furnished. In other words, the inadequacy of medical treatment provided is determined not by the percentage of total accidents covered but rather by the percentage of serious accidents adequately treated. An investigation made by the Ohio Industrial Commission in 1914 showed that of 8,277 cases of minor accident (less than 1 week's disability), the medical expense in 82 per cent was under \$5 and in 97 per cent under \$10.

PER CENT OF NONFATAL INDUSTRIAL ACCIDENTS OF OVER ONE WEEK'S DISABILITY IN CERTAIN STATES, CLASSIFIED BY PERIOD OF DISABILITY.

Period of disability.	Washington, 1917 (13,941 temporary total cases).	Nevada, 1913-1916 (1,730 nonfatal cases).	Oregon, 1915 (1,808 temporary total cases).	California, 1917 (27,775 temporary total cases).	Wisconsin, 1916-17 (15,915 temporary total cases).	Massachusetts, 1917 (47,190 nonfatal cases).	Standard Table (100,000 temporary total cases).
Over 1 to 2 weeks.....	32.3	20.9	37.8	38.8	37.4	30.1	33.0
Over 2 to 3 weeks.....	19.6	19.8	20.4	16.3	22.7	16.3	19.9
Over 3 to 4 weeks.....	11.7	14.7	12.7	11.4	12.9	30.0	11.7
Over 4 to 5 weeks.....	8.8	9.4	10.0	8.8	8.6	23.7	19.5
Over 5 to 6 weeks.....	5.2	5.5	4.6	6.3	5.1		
Over 6 to 7 weeks.....	4.2	4.0	3.4	4.4	3.1		
Over 7 to 8 weeks.....	2.9	2.5	1.8	3.0	2.4		
Over 8 to 9 weeks.....	2.8	4.0	2.0	2.3	1.6		
Over 9 to 10 weeks.....	1.4	2.1	1.1	1.6	1.1	8.7	6.1
Over 10 to 11 weeks.....	1.3	1.0	.9	1.1	.8		
Over 11 to 12 weeks.....	.9	.9	.6	1.1	.7		
Over 12 to 13 weeks.....	1.4	.4	1.3	.8	.5	4.6	3.5
Over 13 to 25 weeks.....	5.1	3.6	2.8	13.3	2.3		
Over 25 weeks.....	2.5	2.1	.7	.8	.8	2.8	
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup> Over 13 to 25 weeks.

<sup>2</sup> Over 25 weeks.



It will be noted that Nevada and Massachusetts include all nonfatal accidents of over one week's disability while the other States and the Standard Accident Table cover only temporary disabilities. This explains in part at least the smaller percentages of less serious accidents in Nevada and Massachusetts. The percentages are possibly affected also by the differences in the completeness with which accidents are reported in the several States. There is a close similarity between Washington, Nevada, and Massachusetts and also between Oregon, California, Wisconsin, and the Standard Table, the former group having relatively fewer minor accidents and a greater number of long-term disabilities. It will be observed also that Dr. Rubinow's Standard Accident Table has a relatively greater number of accidents causing disability of 1 to 2 weeks and fewer causing disability of over 13 weeks.

The following tabulation of the above data shows the percentages of accidents in which disability did not terminate within certain specified periods:

PER CENT OF INDUSTRIAL ACCIDENTS OF OVER ONE WEEK'S DISABILITY IN WHICH DISABILITY DID NOT TERMINATE WITHIN CERTAIN SPECIFIED PERIODS.

Disability did not terminate in—	Washington.	Nevada.	Oregon.	California.	Wisconsin.	Massachusetts.	Standard Table.
2 weeks.....	67.7	70.1	62.2	61.2	62.6	69.9	61.1
3 weeks.....	48.1	50.3	41.8	44.9	39.9	41.2	41.2
4 weeks.....	36.4	35.6	29.1	33.5	27.0	39.9	29.5
8 weeks.....	15.3	14.2	10.3	11.0	7.8	16.2	9.7
9 weeks.....	12.5	10.2	8.3	8.7	6.2	7.5	3.6
13 weeks.....	7.5	5.8	4.4	4.1	3.1		

Using the Washington statistics as the criterion, it will be seen that in those States which limit the medical service to two weeks<sup>1</sup> about 68 per cent of the accidents are inadequately provided for; in those States having provisions with a three weeks' limit (Michigan, Nebraska, and New Mexico) this inadequacy covers 48 per cent of the accidents; even in the 90-day States (Kentucky and Minnesota) 7 per cent are insufficiently provided for. The relative inadequacy of the other States may be obtained from the preceding tables.

The inadequacy of medical service due to the statutory time limits is still further increased in some States by limitations upon the amount or cost of treatment which employers are required to furnish. These maximum limitations range from \$25 in Delaware and Pennsylvania to \$250 in Oregon. The effect of such limitations may be seen from the following table which shows the medical costs of accidents in Ohio.

<sup>1</sup> Delaware, Maine, Montana, New Jersey, Oklahoma (15 days), Pennsylvania, and Vermont.

NUMBER AND PER CENT OF INDUSTRIAL ACCIDENT CASES IN OHIO FROM MAR. 1, 1912, TO DEC. 31, 1913, CLASSIFIED BY AMOUNT OF MEDICAL AWARD.<sup>1</sup>

Amount of medical award.	Number.				Per cent.			
	Fatal.	Perma- nent dis- ability.	Tempo- rary disability of over 1 week.	Total.	Fatal.	Perma- nent dis- ability.	Tempo- rary disability of over 1 week.	Total.
Under \$25.....	14	161	3,858	4,033	46.7	60.5	91.9	89.8
\$25 to \$50.....	8	50	244	302	26.7	18.8	5.8	6.7
\$50 to \$100.....	4	32	67	103	13.3	12.0	1.6	2.3
\$100 to \$150.....	1	9	14	24	3.3	3.4	.3	.5
\$150 to \$200.....	1	7	10	18	3.3	2.6	.2	.4
\$200 and over.....	2	7	4	13	6.7	2.6	.1	.3
Total.....	30	266	4,197	4,493	100.0	100.0	100.0	100.0

<sup>1</sup> Ohio Industrial Commission, Department of Investigation and Statistics. Report No. 2, 1914, pp. 23-30.  
<sup>2</sup> One permanent total case.

It will be noted that a low maximum limitation upon the amount of medical service affects adversely cases of permanent disability in particular. In 40 per cent of such cases the medical costs were \$25 or more; in 21 per cent the costs were \$50 or more; and in 2.6 per cent the costs were \$200 or over. In 10 per cent of the accident cases the medical costs were \$25 or more.

In several of the States the maximum limit is high enough to cover practically all except the more serious injuries, but it is in severe injury cases that the workman's needs are greatest. Hawaii, Louisiana, Maryland, and West Virginia have \$150 limits, Ohio and Utah have a \$200 limit, and Oregon has a \$250 limit. But that even these high maximums are inadequate is shown by the following recommendation of the compensation commissioner of West Virginia:

The present act provides for a maximum of \$150 to be expended for medical, surgical, and hospital treatment in any one case, but to relieve what would otherwise be permanent disabilities the commissioner may spend for secondary treatment a sum in excess of \$150, but not to exceed \$300. I find that the limit of \$150 is sufficient in a great majority of cases and that the additional \$150 has enabled us to relieve and make useful citizens of employees who would otherwise be possible cripples for life and placed upon the pension rolls of the department. However, some employees are so severely injured, burned, multiple fractures, etc., that the maximum of \$150 is insufficient and the cases can not be considered as covered by the \$300 maximum. I am, therefore, of the opinion, that provision should be made for the payment of an additional \$150, making the total payment for medical, surgical, hospital, and artificial appliances not to exceed \$450.<sup>1</sup>

"There is no doubt," says the Ohio Industrial Commission in this connection, "that in a very small per cent of the severe cases of industrial accidents the limit of \$200 does not take care of the medical aid which is necessary to be rendered, and in some of these

<sup>1</sup> Report of West Virginia State Compensation Commissioner for 1917, pp. 6, 7.

cases an injustice is done to the injured workman and the physician or the hospital."<sup>1</sup>

It must be admitted, however, that in many cases employers and insurance companies furnish medical service in excess of the statutory requirements, especially if by so doing the period of disability can be materially shortened. Furthermore, it is a common practice of many of the larger employers, who have an organized establishment medical service and hospital, to provide full medical treatment irrespective of the statutory provisions of the compensation acts.

#### SELECTION OF PHYSICIANS.

Should the employer or the employee have the right to select the physician in industrial accident cases? And should this right or privilege be exclusive or restricted? These mooted questions have in recent years received a great deal of attention in the workmen's compensation field. The subject is particularly important because it directly affects the employee, the physician, and the employer. The employee is interested in his own speedy recovery and in having a physician in whom he has confidence; the employer is interested in reducing his compensation and medical costs; and the physician is interested both financially and professionally. The interplay of these various and sometimes conflicting interests constantly causes friction and creates innumerable difficulties.

The statutory provisions and actual practices as regards selection of physicians are as follows:

*Selection by employee at employer's expense.*—In seven States injured employees are granted the right to select their own physicians at the employers' expense. In three of these States (Massachusetts, Rhode Island, and Washington) this right is granted specifically in the act, while in four States (Nevada, Ohio, Oregon, and Vermont) the employee is granted this privilege by virtue of rules or interpretations of the administrative commission. In addition, the Texas act allows the employee to select the physician if the employer, having engaged a contract physician, fails or refuses to file the contract agreement with the industrial accident board. Attention is called to the fact that Nevada, Ohio, and Oregon have exclusive State funds, in which the State becomes the disburser of compensation payments.

*Selection by employee at employee's expense.*—The laws in four States (California, Connecticut, Illinois, and South Dakota) grant the employee the right to select his own physician—at the employee's expense, however.

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<sup>1</sup> Ohio Industrial Commission Bulletin for Oct. 1, 1914, p. 21.



*Selection by employee if employer neglects or refuses to provide adequate service.*—If the employer neglects or refuses to furnish competent medical service, the employee is given the right to select the physician at the employer's expense in 17 States.<sup>1</sup>

*Authority to order change of physicians.*—If the medical service furnished is incompetent or inimical to the injured employee, the laws of six States (California, Indiana, Kentucky, Nevada, Texas, and Virginia) provide that a change of physicians shall be made if requested by the administrative commission or by the employee. In Washington, also, the State medical aid board, by rule, reserves the right to transfer a man for treatment to a surgeon where it becomes evident that the injured workman is not receiving the service that he should at the hands of the physician of his choice.

*Selection of physician by employer.*—In all of the other States which provide for medical service in case of injury, the employer or his representative, the insurance carrier, has the right to select the physician. Most of these laws, however, make no specific provisions as to the selection of physicians, but the courts and commissions generally hold that the obligation of the employer to "furnish" or "provide" medical service carries with it the privilege of choosing the physician. This practice has been based on two theories: First, that the employer is more competent to judge the efficiency of the doctor employed and to provide efficient medical and hospital treatment; and, second, that it is to the interest of the employer to furnish the very best medical and surgical treatment, so as to minimize the result of the injury and to secure as early a recovery as possible. As a matter of practice, however, in quite a large percentage of cases the employee is allowed to choose his own physician, but the extent of this practice depends upon the policy of the employers and insurance carriers. The large employers, especially those having an organized medical service within their establishments, generally insist upon their legal right to select the physician.

*Panel system.*—No State compensation law makes specific provision for a panel of physicians from which a choice is to be made. California, however, has an incipient panel system, as shown in the following statutory provision: "If the employee so requests, the employer shall tender him one change of physicians and shall nominate at least three practicing physicians competent to treat the particular case, or as many as may be available if three can not be reasonably named, from which the employee may choose; the employee shall also be entitled, in any serious case, upon request, to the services of a consulting physician to be provided by the employer; all of said

<sup>1</sup> Connecticut, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Maryland, Minnesota, Nevada, New York, Oklahoma, Pennsylvania, South Dakota, Texas, Virginia, and Wisconsin.



treatment to be at the expense of the employer. If the employee so requests, the employer must secure certification by the commission or a commissioner of the competency for the particular case of the consulting or additional physicians." The foregoing provision does not apply, however, to employers' establishment hospital funds approved by the commission.

A majority of the medical profession thus far seem to be opposed or at least apathetic toward the panel system. Quite a number of State commissioners and members of the medical profession, especially those who have been in close touch with the administration of compensation laws, have come to the conclusion that some check upon free choice, exercised either by the employee or employer, is necessary.

In a paper prepared for the 1918 meeting of the International Association of Industrial Accident Boards and Commissions, Dr. Raphael Lewy, chief medical adviser of the New York Industrial Commission, stated that the ideal plan would be to leave the choice to the medical department of the industrial commission. At the same conference Dr. Charles H. Lemon, of Milwaukee, Wis., stated that no man is justified in doing major surgical work who has not been trained under a competent surgeon; while Dr. J. W. Mowell, chief medical adviser of the Washington Industrial Commission, believed that there should be free choice in ordinary cases, but that in serious cases it would be better for the employee to take the advice of an expert. The State medical aid board reserves the right to order a change of physicians. In a letter to the bureau Dr. F. W. Sears, chairman of the committee on legislation of the Vermont State Medical Society, stated that physicians should be selected by mutual agreement; the employer might allow the employee a choice from a list of physicians.

The California Industrial Accident Commission found "by bitter experience that all physicians qualified by the laws of the State to practice surgery are not necessarily surgeons." The commission advocated a traveling medical inspector who "will be able greatly to diminish the abuse, now frequent, of overstay in hospitals, with the consequent overcharge against the State compensation insurance fund."<sup>1</sup> According to the commission unfit practitioners should be excluded either through the enforcement of the medical practice act or by the commission.

The Boston Medical and Surgical Journal of September 21, 1916, speaks editorially as follows: "It may be also that absolute free choice will eliminate competition between the present 27 insurance companies and bring about the concentration of all the compensation

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<sup>1</sup> Report of California Industrial Accident Commission, 1914-15, pp. 25, 26.

business under one insurance company, with whom all would be required to transact business under direct State supervision. There is a probability that the problem may be solved by the combination of free choice under a supervising consultant, agreeable to and appointed by the insurance companies."

Dr. William. L. Estes, chairman of the committee on workmen's compensation of the Pennsylvania State Medical Society, in a paper read before a conference of industrial physicians in Pennsylvania said:

Again, for injuries a surgeon should be called; few family practitioners have the requisite skill and experience to meet in the most modern way the emergencies of a serious surgical condition. The sufferings and disability of the injured man may be increased and greatly prolonged by the injudicious selection of a surgeon. \* \* \*

Most of the best modern hospitals have a definite organized staff of surgeons to carry on the work of the institutions, and the management of the hospital not only expects but requires them to treat the cases sent to the institution. Many injured men must go to hospitals. It would therefore result in serious confusion and disorganization were it permitted the injured workman to demand that his family physician shall treat him in the hospital. Besides, as stated above, it might result in placing an inexperienced man in charge of him instead of a man whose qualifications had been proved before he was given the place on the hospital staff.<sup>1</sup>

Furthermore, under the present system of selection by the employer, it is not an uncommon practice in some States to allow employees to choose a physician from a panel nominated by the employer or insurance carrier.

#### REASONS WHY EMPLOYER SHOULD SELECT PHYSICIAN.

Inasmuch as the burden of paying the medical costs rests upon the employer, it seems reasonable that he should have a voice in the selection of the physician. He is naturally interested in reducing his compensation costs. This reduction depends to some extent upon the speedy restoration of the injured employee's earning capacity, which in turn is dependent largely upon the adequacy of the medical and surgical treatment furnished. Competent medical treatment, however, is not always possible if the selection of the physician is beyond the control of the employer, who is, as a rule, more competent than the injured employee to judge the efficiency of the physician. The foreign, non-English speaking, and not infrequently illiterate workman naturally chooses a physician of his own nationality, who is often incompetent and sometimes disreputable. Some of these physicians not only attempt to mulct the employers by prolonging treatment, making unnecessary calls, padding their bills, and overcharging generally, but because of their incompetency are an actual menace to the patients themselves. Numerous cases are on record in which injuries which should have

<sup>1</sup> Monthly Bulletin of Pennsylvania Department of Labor and Industry for February, 1917, pp. 51, 52.

had the attention of highly skilled surgeons were treated by physicians without surgical practice and wholly incompetent. Such treatment is always costly to the employer and frequently harmful to the injured workman. As stated by Dr. J. W. Mowell, chief medical adviser of the Washington State Industrial Commission, before the meeting of the International Association of Industrial Accident Boards and Commissions previously mentioned:

While this plan [selection by employee] seems quite equitable and it appears to be the natural thing to do, it has a good many shortcomings. For instance, to the isolated workman who is employed in a locality where there are only one or two physicians, free choice means little, and the injured workman has to accept the services of the first physician he can obtain. However, in the larger cities where there is a great number of physicians we find that some of the workmen make a wise choice while quite a large per cent of them, for some reason or other, select a physician who is not very well equipped for the work at hand. We often find that a workman who has received a serious fracture will select a physician who knows very little about fractures; also a man who receives an injury to his eyes may go to an ordinary practitioner for treatment until the serious nature of the case makes it necessary to transfer him to an eye specialist, whom he should have consulted in the first instance. This occurs more or less with reference to all kinds of injuries. \* \* \*

To my mind the principal thing that can be said in favor of free choice of physician by the injured workman is the effect it has on his mind—that is, the feeling that he is getting what he wants.

Because of these conditions many employers and insurance carriers have insisted upon their legal right to select the physicians, and the tendency to exercise this right seems to be on the increase. Most of the large manufacturing establishments, and even some of the insurance companies, have established hospitals in connection with their plants. It is maintained that more efficient medical service can thus be rendered at much less cost. Furthermore, it allows closer medical supervision. A common complaint made by employers is that workmen will not report minor injuries, many of which become septic and develop into serious cases. The prompt attention given to injuries and the close personal supervision made possible through an establishment hospital minimize the danger of blood poisoning and result in earlier recoveries. It is also maintained that malingering can be better controlled and prevented when the employer has supervision over the medical service furnished.

#### REASONS WHY EMPLOYEE SHOULD SELECT PHYSICIAN.

On the other hand, during the last two or three years, there has been a widespread reaction against the present system of selection by employers, and it may well be asked, Why this reaction if the system is as beneficial as is maintained by its advocates? Three reasons are generally advanced in favor of free choice of physicians by employees.



In the first place, the free and unhampered choice of one's own physician has generally been considered as one of the inalienable rights of mankind. The relationship existing between a patient and his physician is private and personal. Furthermore, the therapeutic value of confidence and faith in one's physician is well recognized by the medical profession, and this confidence naturally is assured when the injured workman selects his own physician. Moreover, the injured man has most at stake. It is he, and not the employer or physician, who suffers; it is his life which hangs in the balance. A man desires a doctor whom he knows, with whom he can freely and unreservedly discuss his ailment, and in whom he has confidence.

Another factor which has influenced the movement for free choice has been the dissatisfaction with the kind of medical service frequently furnished by employers and insurance carriers. While it is true that many employers maintain excellent hospitals with highly skilled surgeons and trained nurses in charge and provide medical treatment even in excess of statutory requirements, this is by no means the general practice. The kind of service furnished by many employers, and particularly by insurance companies, is entirely inadequate. There has been a tendency to employ contract doctors (and this tendency is increasing), many of whom have not been especially competent. Furthermore, physicians employed on a contract basis frequently have more cases than they can take care of properly and in addition are not inclined to give them the same personal attention as would be given by physicians engaged directly by the employee. The evils and abuses of this contract system have been repeatedly pointed out and condemned by compensation commissions and the medical profession.

Another important problem is to determine when the injured workman has sufficiently recovered to be able to return to work. Obviously it is to the employer's interest to reduce the disability period as much as possible, and frequently this fact influences unduly the decision of the employer's physician, especially if employed on a contract basis.

The third factor in the movement for free choice has been the opposition of the medical profession to the medical practices of the employers, and particularly of the insurance companies, which have developed under the compensation laws. Physicians have demanded their regular rates—those which they had charged before the advent of workmen's compensation laws. Insurance companies, on the other hand, have insisted that the increased security of payments under compensation and the economic and financial status of the injured employee should be taken into consideration in determining the



reasonableness of fees for medical and hospital services. There has also been a tendency on the part of some physicians to pad their bills and raise their rates. As might be expected, such a condition immediately resulted in numerous and acrimonious disputes, between the medical profession on the one hand and the employers and insurance carriers on the other, as to medical fees. The compensation commissioners were usually able to effect a working compromise, but such compromises have on the whole been unsatisfactory. Insurance companies have refused to pay medical bills unless they were satisfactory, and physicians in retaliation have threatened to refuse to treat industrial cases unless guaranteed their regular rates. As a counter measure employers and insurance carriers have begun to furnish their own medical service, establishing dispensaries and hospitals and engaging surgeons and trained nurses. Obviously a continued extension of the system of establishment hospitals and contract doctors would ultimately exclude a large majority of the medical profession from the field of industrial surgery. It is the evident extension of this practice that causes apprehension in the ranks of the profession and is the motive power behind their movement for free choice of physicians.

#### CONTRACT DOCTORS AND ESTABLISHMENT HOSPITALS.

The medical practices or the form of medical organization for taking care of injured workmen under compensation laws vary with the different sections of the country, with the size of the establishment, and with the policy of the insurance carrier. When State compensation laws were first enacted many of the larger employers had in operation benefit schemes for the protection of their employees in case of accident or sickness. The compensation laws in about one-half of the States permitted these substitute schemes to continue, provided the benefits furnished equaled those provided in the compensation acts. Thus, many, if not most, of the larger employers in the United States at present, have their own organized medical service and establishment hospitals with surgeons and nurses in charge. A welfare investigation recently made by the United States Bureau of Labor Statistics<sup>1</sup> included a study of 375 establishments having welfare departments. These 375 establishments employed 1,204,000 workers. Of these 375 establishments 71 per cent had a hospital or emergency room and 46 per cent had a doctor.

In the western States, especially in the mining regions, the system of establishment hospital and benefit funds prevails. The compensation laws of seven western States<sup>2</sup> specifically authorize employers to make contracts with their employees for medical and hospital service.

<sup>1</sup> Welfare work for employees in industrial establishments in the United States, Bulletin of the U. S. Bureau of Labor Statistics No. 250, p. 15.

<sup>2</sup> Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Washington.

The extent of this contract hospital system may be seen from the following: In Washington 60 per cent of the employees paid hospital dues; in Oregon 57 per cent of employees paid such dues; in Montana 80 per cent of the employees are under hospital agreements; in Minnesota 60 per cent of the cost of the medical service is on a contract basis. Employees generally are required to contribute \$1 a month for the support of these funds and hospitals, but the medical service furnished usually covers sickness as well as accidents.

One criticism against the contract system is that the cost of the medical benefits under the compensation law—a burden it was intended for the employer to assume—is shifted to the employees.

- Another criticism is the commercialization of the medical service by nonmedical men. As pointed out by Dr. J. W. Mowell, chief medical adviser for the Washington Industrial Commission, before the I. A. I. A. B. C. conference already referred to—

There is one unfortunate feature of the contract plan that has given and is at present giving the State medical aid board considerable trouble. It is the commercializing of the contract plan by nonmedical men who form a hospital association and then go to the employer and employees and by offering them some special inducement get the signatures of the workmen giving their consent to the employer to make a contract for their care. Then they secure the services of a surgeon and pay a small part of the proceeds to him for the work and keep the remainder. This has brought about a lot of dissatisfaction among the workmen and physicians of the State causing some agitation at the present time toward State hospitals for the care of workmen under the industrial act.

The most potent criticism against contract practice is that through it injured employees receive inferior service. As already stated, many employers furnish medical and surgical treatment of the highest character, but that is not the general custom and is especially not true in case of many insurance companies. The California Industrial Accident Commission in its 1916-17 annual report made the following observation regarding the contract system:

Many poorly equipped medical men are not above accepting industrial cases which they can not handle. The commission feels keenly its responsibility in this matter, and, of course, desires that the very best services shall be accorded the injured workman.

There has been noted in the last fiscal year an ever-increasing tendency toward "contract practice" among the insurance companies. This is a most deplorable condition, since the contracts are frequently made with men of poor judgment and some whose only equipment appears to be a willingness to work for little money. One great failing in this contract work is that treatment and results of treatment are seldom subject to comparison or supervision. There is a tendency toward surgical "inbreeding" in that a man, secure in his exclusive care of the cases for an insurance company, may do pretty much as he pleases as long as he is acceptable to the company. The result is poor work.

Very often has contract practice brought to this office cases for inspection by our medical department. These injured men present themselves for the purpose of satisfying their doubts as to the results or character of treatment which they have received.

These examinations frequently result in change of doctors or exactions of satisfactory treatment by the insurance companies. \* \* \*

Whether the control of the medical practice and the exclusion from the industrial accident field of the unfit practitioners shall come through an enforcement of the medical practice act, or whether through regulations of the industrial accident board specifying the character of physicians eligible for industrial work is not yet known. The situation constitutes a distinct menace at the present time, and suggests possible failure of the good effects of a most excellent law.<sup>1</sup>

"There are many good doctors," said Dr. B. P. Magnuson, medical director of the Illinois Industrial Commission, before the recent workmen's compensation conference, "who work on a salary basis, but most of them will not do it, especially in the large cities where they have a large outside practice. There are many good men who have started as contract surgeons, simply as a stepping stone to work up, but those men leave it, because they can't get adequate compensation for their work from the corporation. The contract surgeon, therefore, has fallen into disrepute, because, on the average, he doesn't measure up to men in civil practice who are doing the best kind of service. \* \* \* The contract surgeon is often careless; he gets a biased view. The claim agent bothers the life out of him to get a man back to work."

#### MEDICAL AND HOSPITAL FEES.

Probably no one phase of workmen's compensation has created more administrative difficulties or caused more ill feeling than the question of medical and hospital fees.

*Basis for medical fees.*—Prior to the enactment of workmen's compensation laws there had been little distinction in the treatment of injuries which arose out of the employment and those which arose outside of the employment. In either case the person sustaining the injury was financially responsible for the medical and hospital treatment furnished; but since a large proportion of such persons were unable to pay for the treatment received the hospitals and physicians accepted them as charity patients, usually charging low rates and collecting fees only in cases where the patient could afford to pay. The compensation laws, however, definitely placed upon the employer the burden of furnishing medical services in industrial accident cases; but no provision was made as to medical fees, except that they should be reasonable, and, in 14 States,<sup>2</sup> that they should be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living when treatment is paid for by the injured persons. In view of these facts the medical profession as a whole maintained that medical services in

<sup>1</sup> Report of California Industrial Accident Commission, 1916-17, pp. 21, 22.

<sup>2</sup> Connecticut, Hawaii, Idaho, Indiana, Kentucky, Louisiana, Maryland, Minnesota, Nevada, New York, Oklahoma, Texas, Vermont, and Virginia.



industrial cases should be remunerated at full value and that such cut rates and charity as had been granted the sufferers by hospitals and doctors should be discontinued. They also believed it to be an injustice to expect the medical profession to adopt a sliding scale of fees, governed by their clients' ability to pay, when other institutions and businesses, including the very same employers and insurance companies, are not subjected to the same principles and practices.

Obviously, the medical profession, in common with other professions and vocations, should receive a just and adequate remuneration for its services. The ordinary fee rates of physicians are probably determined in a general way with reference to the paying ability of the moderately well-to-do classes of society. Undoubtedly they are also influenced by the fact that much of the medical service rendered the poorer classes will never be paid for. In view of these facts what would be a just basis for determining reasonable and equitable fees for medical services? As already stated, 14 laws provide that the standards prevailing in the community for treatment of persons having the same standard of living should be taken into consideration. Three States (Idaho, Kentucky, and Texas) further provide that the increased security of payment guaranteed by a workmen's compensation law should also be taken into account. Practically all of the State commissions do consider these factors in determining the reasonableness of medical fees.

*Fee schedules.*—The ultimate determination of the reasonableness of medical fees in workmen's compensation cases lies with the administrative commissions and courts.

In 26<sup>1</sup> States the compensation commissions or courts are specifically authorized to approve, regulate, or fix the amount of medical and hospital fees. The laws of two States (Colorado and Washington) authorize the commission to issue a table or schedule of fees which shall serve as a basis for compensating medical services rendered. Moreover, medical fee schedules have been put into effect, under general authority to regulate or approve medical fees, by the compensation commissions of the following States: California, Maryland, Nevada, Ohio, Oregon, and West Virginia. In passing it may be noted that all of these States have either exclusive or competitive State insurance funds. Also, the Massachusetts and New York compensation commissions, in approving medical fees, have been governed by a medical and a hospital fee schedule formulated in cooperation with the medical profession, hospitals, and insurance companies of the State. In New York, however, the State medical

<sup>1</sup> California, Colorado, Connecticut, Delaware, Hawaii, Kansas, Idaho, Illinois, Indiana, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Nevada, New York, Ohio, Oklahoma, Rhode Island, South Dakota, Texas, Utah, Virginia, and Wisconsin.



society later repudiated the fee bill because the insurance companies interpreted it as "a maximum fee bill, not as a minimum fee bill."<sup>1</sup>

In addition to the foregoing official schedules promulgated by the State compensation commissions, medical fee schedules have been adopted quite extensively by insurance companies, by many county medical societies, and by a few State medical societies. There is a fundamental difference, however, between the schedules adopted by the medical societies and those adopted by the insurance companies. The former are generally minimum fee schedules, whereas the latter are maximum schedules. Moreover, the medical societies have difficulty in maintaining strict adherence to their schedules on the part of the members of the profession; on the other hand, relatively few of the experienced physicians and surgeons will sign the schedules of the insurance companies.

The rates contained in the fee schedules adopted by the several States enumerated above are somewhat lower than the regular rates of the profession. In many of the States the rates approved vary between different communities, depending upon the prevailing rates in the locality. In Massachusetts, for example, the guideposts by which the industrial accident board determined the reasonableness of fees were (1) the locality in which the doctor practices, (2) the nature of the complaint, (3) the ability of the man to pay, and (4) the standing of the practitioner in his profession.<sup>2</sup> In Ohio, however, the amount of medical fees was determined with a view to impartiality and uniformity. Said the Ohio Industrial Commission in this connection:

We can not consider and maintain this impartiality and uniformity, of which we speak, if, as has been suggested by some physicians, we consider that the same services demand different fees from different localities, in industrial accident work. It is to be remembered that this act contemplates the considering of this whole subject on an industrial accident basis. This is an industrial accident law, based on industrial conditions, and the lack of appreciation of this very fact is the one great reason why there is difficulty regarding the medical aid feature. The medical aid compensation is charged to the employer on an industrial accident basis. The act contemplates the payment of reasonable compensation to the injured and reasonable compensation for medical attention.<sup>3</sup>

Because of the great variations in kind and amount of treatment required even for similar and apparently identical injuries, it is impossible to determine in advance what would be a reasonable fee for a particular injury. Consequently a medical fee schedule is commonly used merely as a guide or as a minimum fee table.

Because of the medical fee question, workmen's compensation laws have been the subject of considerable objection and adverse criticism

<sup>1</sup> Quoted from American Medical Association Bulletin of May 15, 1915, p. 338, by Dr. I. M. Rubinow in July, 1917, issue of the *Journal of Political Economy*, p. 717.

<sup>2</sup> First annual report of Massachusetts Industrial Accident Board, 1912-13, p. 50.

<sup>3</sup> Ohio Industrial Commission Bulletin, Oct. 1, 1914, pp. 14, 15.

by a part of the medical profession. Generally this criticism is of two kinds: (1) That directed against the law and its administration, and (2) that directed against the unfair and unreasonable practices of certain employers and insurance carriers. The first kind is generally heard most when a compensation law is first put into effect and is due primarily to the physicians' unfamiliarity with the law and with the duties and functions of the compensation commission. The loudest criticisms, too, generally come from those physicians who do not stand highest in the profession. The large majority of the profession have cheerfully cooperated with the commissions in the administration of the laws in the interest of the working classes for whose benefit such laws were enacted, and it is seldom indeed that a compensation commission has had difficulty with the higher class physician and surgeon. The second criticism is generally the result of certain practices on the part of employers and insurance carriers which are considered unfair to the medical profession and inimical to the best interest of the injured workmen.

The following extracts from a report made by the Massachusetts medical advisory committee to the physicians of the State probably epitomize the general experience under compensation laws in the United States:

A small proportion of these [insurance] companies have adjusters and other subordinates who are at times inclined to play cheaper games than proper. There has been a tendency on the part of some physicians, not many of them members of our societies, but still physicians ostensibly respectable, to pad their bills and raise their rates; in other words, to treat this law as an opportunity for medical graft. In many of these matters the medical advisory board has been able to help the industrial board toward a solution. \* \* \*

It seems to us that the whole intent of the law is not charity, but rather to lift the injured workmen out of the pauper class and, at least for the fortnight following the injury, to furnish them with the best care, to give them the best possible chance for complete and early recovery and return to working power. Some of the insurance men regard the whole matter, seemingly, as a partially charitable service, and argue that as cut rates and charity were granted the sufferers by doctors and hospitals before this act went into effect, therefore this sort of thing should continue. \* \* \*

Here and there insurance companies, usually the unimportant ones, have shown a desire to press the advantage given them by the phrase of the current law. In the main, however, the better companies \* \* \* have shown themselves decent and reasonable, not inclined to overwork a technical advantage.<sup>1</sup>

*Hospital fees.*—The problem of determining the reasonableness of medical fees is further complicated when the injured man is sent to the hospital. The added difficulty arises from the fact that hospitals are in part charitable institutions and supported by donations of public-spirited citizens. Hospitals usually have three classes of service—public wards, semiprivate rooms, and private rooms. The public wards are maintained, at nominal prices, frequently less than

<sup>1</sup> Boston Medical and Surgical Journal, Sept. 18, 1913, p. 444.

actual cost, for patients who have limited means, which includes most of the industrial workers. Moreover, in case of public ward patients, no charge is made for the attending physician or surgeon. For the other classes of service the rates are not only much higher, but fees for attending physicians and surgeons must be paid in addition. The question immediately arises, Should injured employees be placed in public wards, as they probably would have been before the enactment of compensation laws, or should they be placed in semiprivate or private rooms? If the former practice is followed the employers and insurance companies are benefited at the expense of the physicians and hospitals; whereas, if the latter plan is adopted, the remuneration received by the medical profession would not be in accord with the compensation acts, which provide that medical fees should "be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living when such treatment is paid for by the injured persons"; and consequently employers and insurance carriers would be required to pay more than was intended by the law. The insurance companies maintain that were the injured workman to pay for his own medical and hospital bills he would in most cases be sent to a public ward, and physicians would graduate their charges according to the patient's income and ability to pay. They contend, further, that when the large majority of industrial workers receive under \$15 a week it is idle to assume that such employees would be charged semiprivate-room rates and for the doctor's services in addition. In one of the compensation districts in Connecticut an agreement between insurance companies and physicians was reached whereby employees receiving over \$12 a week should be placed in semiprivate wards at a weekly rate of \$10, plus charges of the attending physician. Employees receiving under \$12 were to be placed in a public ward at \$7 a week, with no fees for the attending physician.

On the other hand, the hospitals maintain that they should not be asked to treat compensation cases at a loss. The practice among hospitals varies. Some place compensation cases in public wards, some in semiprivate rooms, and others maintain a "compensation ward" at intermediate rates. The practice of doctors in sending patients to hospitals also varies. The majority, however, recommend that patients be placed in semiprivate wards, thus entitling them, according to the rules of the profession, to charge for their services in hospital cases.

The following recommendation of the Connecticut Medical Society probably voices the opinion of hospitals and the medical profession in general as regards proper hospital fees in compensation cases:

If the spirit underlying this act is to make each industry carry the expense of the casualties that occur in the conduct of that business, it fails of doing so when the hos-



pitals and physicians are forced to care for them at a loss, or as charity cases. It costs the hospitals from \$10 to \$15 per week to care for cases. If compensation cases are placed in public wards at \$7 per week, the balance has to be made up by contributions that are made for charity, and physicians should not be asked to treat these cases for nothing in hospitals, any more than they are asked to treat them outside for nothing.

We recommend that these cases when needing hospital treatment be placed in semiprivate wards at a rate that reimburses the hospital for the expense of their care, and that physicians rendering services to such cases be paid at the rate of office charges as prevail in the same community for similar treatment of injured persons of a like standard of living when such treatment is paid for by the injured person.<sup>1</sup>

In Massachusetts the industrial accident board found that as a result of the enactment of the compensation law many of the hospitals throughout the State increased their rates and discriminated against employers insured under the act in favor of those who did not insure.<sup>2</sup> The board met this problem by calling a conference of the hospitals of the State, which resulted in the appointment of a special committee to consider the subject and suggest a remedy. As a result of the recommendations of this committee the board adopted a plan by which the hospitals were allowed to charge the insurance companies for the care of an injured patient the same rate that they would charge an employee of a man not insured. In a general way the payment for hospital services was based upon the rule that for the first two weeks' services \$15 per week would be allowed, provided that \$15 was not a higher rate than was charged the uninsured employee or the public at large; for subsequent weeks in unusual cases it was felt that some concessions should be made by the hospitals, and many of them made concessions from this rate, even if the rate did not cover the actual cost. Reasonable extras were allowed—a fee for the taking of X-ray plates; ambulance fee; fee for plaster of Paris casts; fees for special nurses, not exceeding \$4 per day; and fees for private rooms, not exceeding \$25 per week, when the condition of the patient or the character of the injury is such that he needs isolation.<sup>3</sup> By the plan adopted, when a surgeon was employed to care for an injured person and such person was admitted to the hospital, or when the custom or rule of the hospital provided that the patient pay the surgeon's fee, the board would approve of the payment of a reasonable fee to the surgeon, in addition to the hospital charges.

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<sup>1</sup> Report of the Connecticut Board of Compensation Commissioners for 1914, pp. 17, 18.

<sup>2</sup> First report of Massachusetts Industrial Accident Board, 1912-13, p. 57.

<sup>3</sup> See statement of Dr. F. D. Donoghue, medical adviser of Massachusetts Industrial Accident Board before Conference on Social Insurance, 1916. United States Bureau of Labor Statistics Bulletin No. 212, p. 311.



## EFFECT OF COMPENSATION LAWS UPON INCOME OF PHYSICIANS.

It is the consensus of compensation commissions and many physicians who have investigated the matter that workmen's compensation laws have increased rather than diminished the income of the medical profession, and this despite the fact that the rates in industrial accident cases have been somewhat reduced. Certainly the effect has not been detrimental in a pecuniary way. The lower schedule of fees has been counterbalanced by certainty of payments. "It is of great interest to physicians to remember," says the Ohio Industrial Commission, "that in the past, in from 50 to 75 per cent of the cases taken in aggregate, no pay was received for medical service rendered."<sup>1</sup> Several investigations of the effect of compensation laws upon the income of physicians have been made by members of the profession. Dr. F. T. Rogers, former editor of the *Providence Medical Journal*, as a result of a questionnaire sent to the doctors of the State of Rhode Island, found that in about one-half of the cases in which replies were received there was no appreciable change in income; in about one-quarter there was an increase in the income; while in the other quarter there was a decrease in income. Summing up, Dr. Rogers said: "An act which affects but 13 per cent of the profession<sup>2</sup> unfavorably can not be a serious menace to our interests."<sup>3</sup> Dr. William L. Estes as a result of a questionnaire sent to the physicians of Pennsylvania said: "It is evident, therefore, that a majority of the physicians of the State believe the law a good one, and is working efficiently for the good of the workingman, and not to the detriment of the physicians."<sup>4</sup> Dr. Sears in a letter to the Bureau of Labor Statistics stated that in his judgment the Vermont compensation law has somewhat increased the remuneration of the medical profession. "It is probable," says the Wisconsin Industrial Commission,<sup>5</sup> "that the compensation act has very greatly increased the income of the medical profession as a whole." The medical advisory committee of Massachusetts stated as its opinion that the compensation law "has worked out well so far—for a new law—and that on the whole the medical profession has lost nothing by it."<sup>6</sup>

As a result of a study of the operation of the compensation law in Massachusetts the Industrial Accident Board reached the following conclusion:

The medical profession is benefited by the workmen's compensation act in many ways. From the standpoint of money it can be shown that the doctors will get more

<sup>1</sup> Bulletin of Ohio Industrial Commission, Oct. 1, 1914, p. 4.

<sup>2</sup> That is, 13 per cent of those to whom questions were sent.

<sup>3</sup> *Providence Medical Journal* for March, 1915.

<sup>4</sup> Monthly Bulletin of Pennsylvania Department of Labor and Industry for February, 1917, p. 43.

<sup>5</sup> Fourth annual report of the Wisconsin Industrial Commission, 1914-15, p. 4.

<sup>6</sup> *Boston Medical and Surgical Journal*, Sept. 18, 1913, p. 444.

for services to injured people than was paid out for all kinds of things under the employers' liability act. \* \* \* Many members of the medical profession in all industrial centers have been for years employed by the insurance companies or the corporations to care for accident cases, their payment including not only compensation for the work actually done, but a certain amount extra to secure their good will, which might later be utilized. Although this was true of doctors favored under the old liability insurance acts, a tremendous amount of free work was done by family physicians and hospitals.<sup>1</sup>

#### ADMINISTRATION—MEDICAL ADVISERS.

All except nine<sup>2</sup> of the 42 workmen's compensation jurisdictions have industrial accident boards or commissions to administer the compensation acts. The numerous technical medical questions involved and the constant need for medical advice have led to the appointment of medical advisers or directors in 13 States<sup>3</sup> and the Federal Government to assist the commissions in administering the medical provisions of the acts.

The duties and functions of these medical advisers generally include the following: (1) To examine claimants; (2) to be witness or give counsel at hearings; (3) to make medical reports on cases; (4) to be present at conference of physicians examining claimants; (5) to make arrangements for specialists' examinations; (6) to select impartial physicians for examinations of claimants; (7) to pass upon the reasonableness of medical and hospital fees.

*Administration by local boards in Washington.*—A notable experiment in the field of medical administration was put into effect in the State of Washington in 1917. The Washington act provides for a State medical aid board composed of the medical adviser of the industrial commission and one representative each of the employers and employees. This board is authorized to divide the industries of the State into five classes, according to hazard. Employers subject to the act are assessed from 1 to 3 cents for each working day of each employee, and contributions to the State medical fund are required once a month. Deductions, from the employees' wages, of one-half of the contributions are authorized by law. The State board is also authorized to promulgate rules, issue a maximum medical fee bill, approve physicians' and hospital bills, and approve contracts between employers and employees as to hospital benefit funds.

The act also provides for the establishment of local medical aid boards for the actual administration of the medical service. Each of these boards, composed of one representative each of the employers

<sup>1</sup> Massachusetts Industrial Accident Board Bulletin No. 6, pp. 8, 9, 11.

<sup>2</sup> Alaska, Arizona, Kansas, Louisiana, Minnesota, New Hampshire, New Mexico, Rhode Island, and Wyoming.

<sup>3</sup> California, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Nevada, New York, Ohio, Oklahoma, Oregon, Washington, and West Virginia.

and employees, must provide care and treatment for the injured, report the beginning and termination of disability and the cause of the injury, and also certify the medical bills. In case of disagreement the local boards shall appeal to the State medical board.

One of the most difficult problems the State board was called upon to solve concerned the appointment and functioning of the local medical aid boards.<sup>1</sup> The framers of the law evidently intended that there should be a local board at each plant. Such local boards were workable in the larger plants but were utterly impracticable in the case of the smaller employers. The board, therefore, divided the State into districts and established a local board in each locality where a physician resides. The larger cities were divided on an industrial basis, six such districts being established in Seattle, and five each in Tacoma and Spokane. The State board experienced great difficulty in having the local boards appointed. The employers as a rule refused to serve on the board because they could not spare the time from their business and since the law allowed only \$3 a day the workmen did not want to give up good-paying jobs to attend to local board work.

This situation was remedied by a 1919 amendment (ch. 130) to the workmen's compensation law. The act now provides for the creation of three local aid districts (one each in Seattle, Tacoma, and Spokane). In each district there shall be a local aid board to consist of two members who are to be appointed by the newly created State safety board. Each member of a local aid board shall receive a salary of \$300 a month. Their duties are enlarged to include accident prevention work.

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<sup>1</sup> Report of Washington State Industrial Insurance Department for 1917, pp. 54-56.





## LABOR TURNOVER AMONG EMPLOYEES OF A CALIFORNIA COPPER MINING AND SMELTING COMPANY.

BY PAUL F. BRISSENDEN.

In an article in the February REVIEW reporting the volume of the labor turnover in a group of California establishments for the year June 1, 1917, to June 1, 1918, there were included summary figures for a copper mining and smelting company.<sup>1</sup> The figures reported in that article showed, for the plant as a whole, (1) the per cent of turnover, (2) the number of accessions to and separations from service, (3) the number and per cent distribution of separations of different types, and (4) the number and per cent of both those on the pay roll at the end of the year and those who left during the year who had worked continuously for specified periods of time. In the following pages more detailed information is given on each of these four points with the purpose of showing the extent to which the different plant divisions were affected by turnover, and especially to show the relative stability of mine workers and smelter men. There are also presented figures showing for each semimonthly pay-roll period of the year covered the number of workers actually employed in each plant division as compared with the equivalent number of full-time workers.

### SYSTEM OF EMPLOYMENT.

The employment system at this establishment, as was pointed out in the earlier report,<sup>2</sup> is semicentralized. There is an employment bureau in operation, but it has jurisdiction and authority over hiring only. The foremen continue to exercise final authority in the matter of discharge. The employment department, through and by which are hired all the men for both mines and smelters, is in the immediate charge of an employment clerk, who works under the authority of the assistant superintendent of the plant. The latter official, who is also in reality the employment manager, is directly responsible to the superintendent for the work of the employment department and usually spends a good part of each day at the employment office. Although the power of discharge is in the hands of the foremen, the records of discharges as well as of other separations "clear" through the employment department, so that the recording of both accessions and separations is centralized in that department. All applicants for work apply at the employment department, which is housed by itself in a small building at the

<sup>1</sup> "Labor turnover in the San Francisco Bay region," in MONTHLY LABOR REVIEW, February, 1919, pp. 45-62. The company here reported in detail is establishment No. 10 in the earlier article referred to, and is one of three located at points in California comparatively remote from the San Francisco Bay region.

<sup>2</sup> MONTHLY LABOR REVIEW, February, 1919, p. 46.

entrance to the company's mining properties. Applicants are required to fill out application blanks and give references, which are afterwards verified.

#### GENERAL LABOR POLICIES.

The plant is operated as an open shop, all properly qualified applicants being hired without regard to affiliation or nonaffiliation with labor organizations. Company officials state that their employees are entirely free to affiliate with labor unions if they care to do so. This policy does not apply to the I. W. W., members of which organization, it is stated, are not knowingly hired under any circumstances and are immediately discharged when found to be in the service of the company. A majority of the mechanics and a large proportion of the mine workers and smelter men belong to the unions of their respective crafts. No collective agreements, however, are entered into between the company and its employees.

Despite the lack of machinery for collective bargaining, the company has made no definite provision for the consideration and settlement of grievances. There is no formal procedure whatever in this matter, the custom being simply for the company officials to meet informal committees of employees to discuss difficulties as they may arise. Appeals from the decisions of foremen or other subordinate officials, including those involving discharges considered unjust, may be taken to the manager or superintendent.

The entire plant operates on a basic 8-hour day schedule. In the machine shop there are six 8-hour shifts a week. In all other parts of the plant there are twenty-one 8-hour shifts a week. The wages paid during the period covered ranged in the smelter from \$3.52 per day for laborers to \$6.50 per day for furnace foremen and in the mines from \$3.75 for laborers (surface men) and \$4 for muckers to \$5.75 for shift bosses.<sup>1</sup> The principal daily rates for other underground jobs were as follows: Mucker bosses, \$5.25; pipemen, \$4.75; trackmen, motormen, cage tenders, machine men, timber men, and cavers, \$4.50; brakemen, mule drivers, chuck tenders, nippers, powder men, hand miners, and helpers, \$4.25.

The company does nothing in the way of shop training for employees except in the machine shop, where there is a 4-year apprenticeship course of the traditional type.

The company maintains a hospital for the care of sick or injured employees and makes it a rule to care for members of employees' families at the hospital and to assume half the cost of such care. No hospital fees are charged.

The mines and smelters whose labor turnover is reported in this article are located about 200 miles from the nearest labor market.

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<sup>1</sup> The rate for foremen (underground) was \$210 per month.

The works are situated near a small village which is located on the main line of a transcontinental railway. The smelters and electrozinc plant are located at some distance from the mines and it is necessary for the mine workers to live at the mine and for the smelter men to live at the smelters, or at least no farther away than the village. The company operates a mine tramway from the smelters to the mines and this serves, in a measure, for the transportation of newly hired employees. There are no other transportation facilities.

This remote location of the plant has obliged the company to do a great deal in the way of company housing of employees. It has about 50 houses in the vicinity of the smelters. These are rented to employees at rates ranging from \$10 to \$15 a month. For the same type of house in the adjacent village the company states that employees would be obliged to pay from \$15 to \$30. At the mines the company has about 40 houses renting at \$5 a month, including light, water, and fuel. Bunks are provided for single men at the rate of one dollar per month. The houses at the mines are usually all occupied. The company believes that its own housing facilities, supplemented by the facilities offered in the village, are equal to the present demand.

The usual conveniences for employees in the way of "change rooms," ice water, etc., are provided. The "change room" at the smelters is inadequate and leaves much to be desired. The "change room" at the mines is very good and its facilities apparently adequate. The company operates a boarding house at the mines but not at the smelters. The charge for board is \$1 per day. It is deducted from the employee's wages. There seem to be very few complaints about the food served in the company boarding house, but there is much fault found with the board available in the town.

#### METHOD OF COMPUTING THE TURNOVER.

Except where otherwise indicated the same method of computing the turnover is used here as in previous articles in this series.<sup>1</sup> The volume of turnover is measured by comparing the average number of full-time workers with the gross number of separations occurring during the period under consideration. Specifically the percentage of turnover for any period is found by dividing the total separations during the period covered (in this report, the year ending May 31, 1918) by the average number actually working each day throughout the period.<sup>2</sup> The resulting figure is the rate of separation from service

<sup>1</sup> See the MONTHLY REVIEW for June, 1918, and the MONTHLY LABOR REVIEW for October, 1918, and January, February, March, and April, 1919.

<sup>2</sup> The average number actually working, i. e., the average number of full-time employees, is found by dividing the aggregate number of 1-man days worked (as shown on the pay roll) by 332 (the standard annual number of days in operation for mines and smelters used by the California Industrial Accident Board). Certain exceptions to this method are noted in the text at the points where they are made.



per 100 full-time workers. This definition of it shows its character more precisely than does the expression, "percentage of turnover." Since it includes all separations regardless of replacements, it should be called the gross separation rate as distinguished from the net separation or replacement rate. This gross separation rate per 100 full-time workers is the particular rate approved as the proper turnover index or percentage by the Rochester Conference of Employment Managers in May, 1918, indorsed by the United States Bureau of Labor Statistics and used, for the most part, as the basis of computation in this article.<sup>1</sup> The nature of the gross separation rate—the particular rate primarily used in this report—and its relation to both the accession (or hiring) rate and the replacement rate are revealed in Table 1.

TABLE 1.—LABOR TURNOVER AND NATURE OF SEPARATIONS DURING THE YEAR ENDING MAY 31, 1918, SHOWING THE NUMBER, PER CENT DISTRIBUTION, AND RATE PER 1,000 FULL-TIME WORKERS IN EACH MINE OR PLANT DIVISION.

Mine or plant division.	Average number of full-time workers.	Em- ployees hired during the year.	Separations.						Per cent of turn- over.
			Dis- charged.	En- tered mili- tary service.	Quit.	Total classi- fied.	No record.	Grand total.	
	1	2	3	4	5	6	7	8	9
Number.									
Mine A.....	58	210	29	.....	115	144	29	173	298.3
Mine B.....	247	883	281	13	921	1,215	45	1,260	510.1
Smelter.....	391	950	140	37	768	945	61	1,006	257.3
Electrolytic plant.....	138	567	88	5	488	581	10	591	428.3
Total.....	834	2,610	538	55	2,292	2,885	145	3,030	363.3
Per cent distribution of separations.									
Mine A.....			20	.....	80	100	.....	.....	.....
Mine B.....			23	1	76	100	.....	.....	.....
Smelter.....			15	4	81	100	.....	.....	.....
Electrolytic plant.....			15	1	84	100	.....	.....	.....
Total.....			19	2	79	100	.....	.....	.....
Rate per 1,000 full-time workers in each division.									
Mine A.....	58	3,621	500	.....	1,983	2,483	500	2,983	.....
Mine B.....	247	3,575	1,137	53	3,279	4,935	182	5,101	.....
Smelter.....	391	2,430	358	95	1,964	2,417	156	2,573	.....
Electrolytic plant.....	138	4,109	493	36	3,536	4,210	72	4,283	.....
Total.....	834	3,129	645	66	2,748	3,459	174	3,633	.....

<sup>a</sup> Including 47 who were laid off for indefinite periods on account of lack of work.

<sup>1</sup> The "Standard definition of labor turnover and method of computing the percentage of labor turnover" formulated by a special committee at the Rochester Conference of Employment Managers is expressed as follows:

The percentage of labor turnover for any period considered is the ratio of the total number of separations during the period to the average number of employees on the force report during that period. The force report gives the number of men actually working each day as shown by attendance record. \* \* \* To compute the percentage of labor turnover for any period find the total separations for the period considered and divide by the average of the number actually working each day throughout the period.

The complete report of the committee was published in the MONTHLY REVIEW of the U. S. Bureau of Labor Statistics for June, 1918, pp. 172 and 173.



The figures in column 9 were computed, as just explained, by dividing the grand total of separations by the average number of full-time workers and multiplying the quotient by 100. It will be observed that these figures are the same as the figures in rate column 8, except that the latter shows the rate per thousand whereas the "percentage of turnover" is the rate per 100. Accession rates per 1,000 full-time workers in each group, corresponding to the separation rates per 1,000, are shown in rate column 2. These two series of rates—accession rates and separation rates—in columns 2 and 8, together with the average numbers of full-time workers shown in column 1, present the whole labor stability situation in a nutshell—and quite independently of any so-called "turnover percentage."

It will be noted (columns 2 and 8) that, for the plant as a whole and for every plant division except mine A, there were more separations than accessions. This relation naturally shows itself in the hiring and separation rates at the bottom of the same columns and reveals the fact that only in mine A was there an increase in the size of the working force during the year studied. In all other divisions, and, as would be expected, in the working force as a whole, the labor force underwent a more or less permanent reduction. The amount and direction of those changes which are over and above maintenance or replacement changes are shown in Table 2.

TABLE 2.—CHANGES IN THE WORKING FORCE DURING THE YEAR ENDING MAY 31, 1918.

Mine or plant division.	Number of employees on pay roll June 1, 1917.	Excess of accessions over separations.	Excess of separations over accessions.	Per cent of increase (+) or decrease (−) in force.
Mine A.....	87	37	.....	+43
Mine B.....	475	.....	377	−79
Smelter.....	407	.....	56	−14
Electrolytic plant.....	144	.....	24	−17
Total.....	1,113	.....	420	−38

It is evident from these figures that the amount of the reduction undergone by the working force as a whole was 38 per cent and that three of the four indicated plant divisions suffered more or less serious contraction—the loss in mine B being particularly heavy. The only section of the working force which was augmented in size during the year was that of mine A, the number of mine workers in which was increased 43 per cent.<sup>1</sup> When during any given period the normal labor complement (expressed in these pages as the average

<sup>1</sup> The manager of the company attributed a large part of the decrease in the size of the working force as a whole to the impossibility of getting the necessary flux for smelting operations. He explained further that the very great decrease in the labor force of mine B was largely due to the opening up in October, 1917, of another mine and the resulting transfer to the new operation of a considerable number of the employees in mine B.

number of full-time workers) in any industrial establishment undergoes a reduction such as that undergone by the concern here reported—a reduction, be it noted, which is more or less permanent and which therefore requires no labor replacements—the number of separations during the period will naturally exceed the number of accessions. Assuming that at the beginning of the period there were no vacant jobs left unfilled from the preceding period, it follows that the number of separations which are replaced is represented by the number of accessions. This latter may be called the net separation or replacement figure. The difference between it and the total or gross separation figure measures the extent to which the working force has suffered (more or less) permanent reduction. The net separation figure divided by the average number of full-time workers (or, what would be better, by the number of 300-day workers) gives the net separation or replacement rate. If the establishment had undergone an enlargement of its normal labor complement during the given period, the accessions, to the extent that they exceeded the separations in number (and assuming, as before, that there had been no unfilled vacancies carried over from the preceding period), would measure the (more or less) permanent enlargement of the working force. In these circumstances all the separated employees would be replaced<sup>1</sup> and their number would be equal to the net accessions. Since the total separation figure in an expanding concern is a net or replacement figure it follows that in such a concern the number of separations can safely be taken without discount in measuring the amount of labor flow involved in maintaining the normal labor complement.

This somewhat labored explanation seems to be necessary in order to make it perfectly clear why certain slightly unorthodox methods of measuring labor stability are resorted to in this article. The analysis of the turnover situation in two western oil refineries in a recent article<sup>2</sup> was developed for the most part on the basis of the Rochester definition quoted on page 66—a definition which identifies “the percentage of labor turnover” as the gross separation rate per 100 full-time employees. These refineries both happened to be undergoing expansion of personnel during the period studied, and all of the separations in that situation represented replacements. For that reason no modification of the Rochester formula was neces-

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<sup>1</sup> It is not believed that the net replacement figure is likely to contain any nonreplacement items. The most important of such items which might be thought to lurk in the net replacement figure are those cases of nonreplacement brought about by a discontinuance of certain occupations either because of the shut-down of that part of the plant which includes those occupations or because of changes in the industrial arts. By definition the net replacement rate excludes all such cases, which by the very process of discounting to get the net rate, are automatically eliminated along with other unreplaced separations. This is believed to be true of either an expanding or a contracting business.

<sup>2</sup> “Labor policies and labor turnover in the California oil-refining industry,” in *MONTHLY LABOR REVIEW*, April, 1919, pp. 23-52.

sary. But in the mining and smelting plant here considered the situation is reversed. The normal labor complement suffered contraction. The separations, therefore, must be discounted to eliminate those which are caused by this more or less permanent contraction of force. The Rochester formula makes no provision for such a discount.

The importance of this matter of method can not easily be exaggerated. It is a matter of no little urgency just now when to a long period of expanding business—which means expanding personnel—has succeeded, for a time at least, a period of hesitating industrial enterprise when the labor forces of our staple industries are being greatly reduced—when, in other words, separations are swinging ahead of accessions, and so coming to measure not merely turnover, the labor flow involved in maintenance of force, but also much of the movement of labor between shops or between the shop and the “road”—that is to say, unemployment in general.

It has already been noticed that even the discounted separations or accessions can not be taken as exactly measuring the number of replacements necessary to maintenance of force during a given period, if at the beginning of the period there were unfilled hold-over vacancies caused by separations in the preceding period. The number hired to fill such positions may be conveniently included with other accessions for the period. Strictly speaking, however, they should be charged to the labor-maintenance account of the preceding period. If the period is only a week such hold-over vacancies will be of considerable moment and should be accounted for in some way. But for periods of a month or longer—certainly for periods as long as a year—it would seem to be quite safe to treat all the accessions and separations of the period as pertaining to labor maintenance for that period.

Labor turnover, then, is meant to refer, or at least it ought to refer, to the amount of labor replacement which is found to be necessary in order to maintain a labor force. It follows that what is called “labor turnover”—establishment labor flow involved in maintenance of force—is most accurately measured by the rate of replacement, a rate which coincides with the separation rate in the case of an expanding business, with the accession rate in a contracting business, and with both rates in a stationary business. Any net excess, either of accessions or separations, is something distinct from maintenance. It has nothing to do with replacement, the ratio of which to the normal working force is labor turnover. It has much to do with unemployment, but it has nothing to do with that special shop-personnel-maintenance phase of unemployment commonly known as “labor turnover.”



It is apparent from the figures of Table 1 that in mine A the 173 separations must all have been replacements, inasmuch as they were exceeded in number by the accessions. The replacement or turnover rate, therefore, is 2,983 per 1,000 full-time workers, and in this case is the same as the separation rate. In the case of the other three plant divisions, and in the case of the working force as a whole, however, it is evident that not all of the separations were replaced, since smaller numbers in each case were hired. The number of accessions, therefore, must indicate the replacements, and the rates of turnover on this replacement basis would be those in column 2. In this case, then, the turnover or replacement rate would be the same as the accession rate. In Table 1 the replacement numbers and rates are set in boldface type. It would seem that, in all establishments such as the one here reported, where the normal working force has undergone a (more or less) permanent reduction during the period under consideration, the gross separation method is bound to show a much heavier turnover than actually exists. And the amount of this distortion is roughly proportionate to the amount of shrinkage in the labor force. Thus Table 2 shows that the smelter suffered the least shrinkage (14 per cent), and mine B the greatest (79 per cent) during the year. The turnover rate for the smelter is 2,573 on the gross separation basis and 2,430 on the replacement basis. The rate for mine B is 5,101 on the gross separation and 3,575 on the replacement basis.

#### THE NATURE OF THE SEPARATIONS.

The separations from service during the year are so classified in Table 1 as to show the number in each mine or plant division who were discharged, entered military service, and left voluntarily. Of the 3,030 separations from the whole plant, 145 could not be classified. Taking the whole working force, of the 2,885 classified separations, 79 per cent left voluntarily, 19 per cent were discharged, and 2 per cent entered military service.<sup>1</sup> Taking into consideration only the 2,885 separating employees the character of whose separations were known, it appears that for the plant as a whole their voluntary leaving rate was 2,748, their discharge rate 645, and their rate of entry into military service 66 per 1,000 full-time workers. In the different plant divisions the rate of voluntary separation ranged from 1,964 per 1,000 full-time workers in the smelter to 3,536 per 1,000 full-time workers in the electrozinc plant; the rate of discharge from 358 per 1,000 full-time workers in the smelter to 1,137 per 1,000 in mine B, and the rate of leaving to enter military service

<sup>1</sup> All lay-offs for lack of work were permanent, so far as known at the time of separation, and they have consequently been classified as discharges.



from 36 per 1,000 in the electrozinc plant to 95 per 1,000 in the smelter. In other words, the smelter men make the least unfavorable showing both as to rate of discharge and rate of voluntary separation. It is to be noted also that they show the highest rate of separation for military service. The most unfavorable showing as regards voluntary separation is made by electrozinc plant employees and as regards discharges, by the mine workers of mine B. The lowest military-service separation rate is that for the electrozinc plant.

#### GENERAL EXTENT OF THE TURNOVER.

The extent of turnover for the year ending May 31, 1918, as well as the nature of the separations, both for the whole working force and for the several plant divisions, are shown in Table 1. It appears from these figures that there were in the course of the year 3,030 separations from, and 2,610 accessions to, a force whose average active personnel was equivalent during that year to 834 full-time workers.<sup>1</sup> Following the accepted formula, this gives a turnover of 363.3 per cent for the whole working force for the year reported. On the same basis it appears that of the indicated subdivisions of the working force, the smelter suffered the lowest and mine B the highest turnover, the percentage figures being 257.3 for the former and 510.1 for the latter. These figures, which purport to measure the turnover by dividing the normal personnel into the gross separations, are to be accepted in the case of this establishment, as has been already pointed out, only with very important reservations. Because of the very considerable reduction in the size of the working force these gross separation percentage figures should be considered in connection with the accession rates, which—in every instance except that of mine A—are also identical with what have already been described as replacement rates. On this replacement rate basis the smelter still shows the lowest turnover—the difference in its favor being even greater than on the gross separation basis. The highest turnover on the replacement basis, however, is to be charged to the electrozinc plant, whereas the other method shows the greatest instability to be in mine B. The gross separation figure for mine B is unquestionably much too high. In view of the fact, as shown in Table 2, that its personnel decreased 79 per cent, or much more than that of any other plant division, it is quite evident that the turnover percentage of 510.1, corresponding to a rate per 1,000 of 5,101, covers a good deal of labor flow which is not turnover—a large amount of labor change, that is to say, which has no reference to replacement or maintenance

<sup>1</sup> There were formally hired during the year in addition to the accessions reported in Table 1 as many as 269 persons who failed to report for work and who were never seen again. The inclusion of these cases would, of course, have materially increased the accession rates. These 269 cases were distributed as follows: Mine A, 8; mine B, 42; smelter, 102; electrozinc plant, 117.

of force. The extent of this nonreplacement element in the whole volume of labor change involved in the gross separation rate of 5,101 per 1,000 is indicated by the difference between that rate and the indicated replacement rate of 3,575 shown in column 2 of Table 1.

**LENGTH-OF-SERVICE RECORDS OF ACTIVE AND SEPARATED EMPLOYEES.**

Monthly and yearly employment figures, expressed in the form of accession and separation rates, are valuable for the purpose of showing the general extent of turnover in the labor force as a whole and its trend during any given period of time. Such figures, however, do not throw much light on the incidence of turnover within the working force. They avail us little in attempting to determine which jobs or groups of jobs are most frequently affected by turnover—that is to say, which jobs are most likely to be occupied by short-time job holders. The individual length-of-service records of active and separated employees help to supply this lack. In Table 3 there is given a length-of-service classification of 588 employees on the pay roll at the end of the year (May 31, 1918), and 2,783 employees who left during the year reported.

TABLE 3.—NUMBER, PER CENT DISTRIBUTION, AND RATE PER 1,000 FULL-TIME WORKERS IN EACH DIVISION, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED SPECIFIED PERIODS OF TIME.

Mine or plant division.	Average number of full-time workers.	Employees on pay roll at end of year ("active" employees) who had worked continuously—										Separated employees who had worked continuously—										Total.	
		Employees on pay roll at end of year ("active" employees) who had worked continuously—										Separated employees who had worked continuously—											
		One week or less.	Over 1 wk. to 2 wks.	Over 2 wks. to 1 mo.	Over 1 mo. to 3 mos.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 yr.	Over 1 yr. to 2 yrs.	Over 2 yrs. to 3 yrs.	Over 3 yrs. to 5 yrs.	Over 5 yrs.	One week or less.	Over 1 wk. to 2 wks.	Over 2 wks. to 1 mo.	Over 1 mo. to 3 mos.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 yr.	Over 1 yr. to 2 yrs.	Over 2 yrs. to 3 yrs.	Over 3 yrs. to 5 yrs.	Over 5 yrs.		
		Number.																					
		Per cent distribution.																					
Mine A.....	58	5	3	1	19	10	8	0	1	0	1	48	20	15	15	17	13	1	2	0	0	142	
Mine B.....	247	3	13	14	17	7	31	9	3	2	9	108	135	111	182	267	83	22	10	5	19	1,161	
Smelter.....	391	31	17	16	35	28	60	19	19	16	101	342	195	112	165	198	55	27	16	14	38	1,913	
Electrolytic plant.....	138	14	4	8	17	10	19	17	1	0	0	90	142	76	111	107	65	20	0	0	1	567	
Total.....	834	53	37	39	88	55	118	45	24	18	111	588	492	314	473	422	216	70	28	19	58	2,783	
Mine A.....	.....	10	6	2	40	21	17	0	2	0	2	100	14	11	11	42	12	9	1	1	0	100	
Mine B.....	.....	3	12	13	16	6	29	8	3	2	8	100	12	10	16	28	7	2	1	1	(2)	100	
Smelter.....	.....	9	5	5	10	8	18	6	6	5	30	100	21	12	18	22	10	6	3	2	4	100	
Electrolytic plant.....	.....	16	4	9	19	11	21	19	1	0	0	100	25	13	20	19	8	11	4	0	0	100	
Total.....	.....	9	6	7	15	9	20	8	4	3	19	100	18	11	17	25	15	8	3	1	(3)	100	
Rate per 1,000 full-time workers in each division.																							
Mine A.....	58	86	52	17	328	172	138	0	17	0	17	828	345	259	259	1,017	293	224	17	35	0	2,448	
Mine B.....	247	12	53	57	69	28	126	36	12	8	36	437	547	449	737	1,324	1,081	89	40	20	77	4,700	
Smelter.....	391	79	43	41	89	71	153	48	48	41	257	870	496	285	420	504	237	140	69	41	36	2,323	
Electrolytic plant.....	138	101	30	60	123	72	138	123	7	0	0	652	1,029	551	804	775	326	471	145	0	7	4,109	
Total.....	834	64	44	47	106	66	141	54	29	22	133	705	590	376	567	829	506	259	84	34	23	70	3,337

1 Not including 25 employees whose length of service was not recorded. 2 Not including 247 employees whose length of service was not recorded. 3 Less than one-half of 1 per cent.

The table shows for each plant division and for the working force as a whole the number, per cent distribution, and rate per 1,000 full-time workers in each division, of active and separated employees who had served continuously for the specified periods of time. Not included in the 1-week-or-less separations are records of 269 men who failed to report for work after being hired.<sup>1</sup> It appears that the highest separation rate for 1-week-or-less "quitters,"<sup>2</sup> which is the service group most responsible for turnover, is to be charged to the electrozinc plant, where 1,029 per 1,000 full-time workers, or 25 per cent of all leaving this plant, left after having served one week or less. Next most unstable is mine B, where 547 per 1,000 full-time workers, or 12 per cent of those leaving, had served one week or less. It is to be noted that, although this mine's 1-week-or-less separation rate is higher than that of any other division except the electro zinc plant, this rate is lower in proportion to its total separation rate—i. e., only 12 per cent—than that of any other division. This is explained by the fact that there were relatively large numbers leaving whose service records fell in the other under-1-year groups.

Turning to the active-service distribution rates, it is at once evident that the greatest stability—that is to say, the highest long-term service rates—are to be credited to the smelter, with no other division really in its class for long-service tenure. Its highest service rate is 257, in the over-5-years group, a rate only exceeded among the establishment's active employees in the over-1-month-to-3-months group of mine A. The percentage distribution figures indicate that this over-5-years group made up no less than 30 per cent of the smelter's active employees. Despite the relatively favorable showing made by the smelter, its turnover, as shown in Table 1, was as high as 257.3 per cent, or, using the replacement rate to make the best possible showing, 243 per cent for the 12 months then ending. Obviously the greater part of this turnover must be due to a small but rapidly changing group within the working force. The separation rates and percentages on the opposite side of the table testify that this is so. No less than 21 per cent of the smelter men leaving during the year had served one week or less. In terms of rates, this means that 496 in each 1,000 leaving the smelter had served one week or less. The length-of-service situation is presented for the establishment as a whole in Table 4.

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<sup>1</sup> See note on page 71.

<sup>2</sup> The word "quitters" is used in these pages in the sense of "terminating," and refers to all employees leaving service for whatever reason.



TABLE 4.—NUMBER, PER CENT DISTRIBUTION, AND RATE PER 1,000 FULL-TIME WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED SPECIFIED PERIODS OF TIME.

Length-of-service period.	Number of employees who had served each specified period of time.	Per cent distribution.	Rate per 1,000 full-time workers. <sup>1</sup>
Active employees.			
One week or less.....	53	9	64
Over 1 week to 2 weeks.....	37	6	44
Over 2 weeks to 1 month.....	39	7	47
Over 1 month to 3 months.....	98	15	104
Over 3 months to 6 months.....	55	9	66
Over 6 months to 1 year.....	118	20	141
Over 1 year to 2 years.....	45	8	54
Over 2 years to 3 years.....	24	4	29
Over 3 years to 5 years.....	18	3	22
Over 5 years.....	111	19	133
Total.....	588	100	705
Separated employees.			
One week or less.....	402	18	590
Over 1 week to 2 weeks.....	314	11	376
Over 2 weeks to 1 month.....	473	17	567
Over 1 month to 3 months.....	601	25	829
Over 3 months to 6 months.....	422	15	506
Over 6 months to 1 year.....	216	8	259
Over 1 year to 2 years.....	70	3	84
Over 2 years to 3 years.....	23	1	34
Over 3 years to 5 years.....	19	( <sup>2</sup> )	23
Over 5 years.....	53	3	70
Total.....	2,783	100	3,337

<sup>1</sup> Based on 834 full-time workers.<sup>2</sup> Not including 25 employees whose service time was not recorded.<sup>3</sup> Less than one-half of 1 per cent.<sup>4</sup> Not including 247 employees whose service time was not reported.

The figures in the upper half of the table show as in Table 3 the length-of-service distribution of employees on the pay roll at the end of the year. They may be assumed to indicate fairly closely the normal length-of-service distribution of the active working force throughout the 12-month period covered in this report. It is quite true that the length-of-service distribution of the active force might have proved materially different had a cross-section been taken at some other date in the year studied. Allowance should be made for a possible margin of error on this score, but it is not believed that this difference is likely to be large enough to be of serious consequence.

The figures of Table 4 show very clearly the enormous difference in length-of-service distribution between active and separated employees. An inspection of the rate and percentage columns makes it very evident that it is the short-time employee who contributes the overwhelmingly greater proportion of the turnover. Thus, of those leaving, 590 per 1,000 full-time workers, or 18 per cent of all leaving, had served 1 week or less, whereas among the active employees the

separation rate for 1-week-or-less "quitters" was only 64, and this shortest time group made up only 9 per cent of those on the active list.

The data presented in the preceding pages make it quite evident that in all divisions both active and separated groups contain rather large proportions of persons with under-1-year service records. Naturally, this proportion of what may be termed "unstable" employees is a great deal higher among "separated" employees than among those found on the pay roll at any given time—the "active" employees. This difference between the active and separated groups is an important measure of the stability of the working force. If the proportion of under-1-year ("unstable") employees in any occupation or establishment is only slightly greater among separated than among active employees, it follows that the turnover in that group is relatively light. In Table 5 a comparison is made between active and separated stable and unstable sections of each occupation group and of the working force as a whole.<sup>1</sup>

TABLE 5.—NUMBER, PER CENT DISTRIBUTION, AND RATE PER 1,000 FULL-TIME WORKERS IN EACH DIVISION, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED ONE YEAR OR LESS AND MORE THAN ONE YEAR, RESPECTIVELY.

Mine or plant division.	Average number of full-time workers.	Employees who had served one year or less or more than one year, respectively.			
		On pay roll at end of year (active).		Separated during the year.	
		Stable.	Unstable.	Stable.	Unstable.
		Number.			
Mine A.....	58	2	46	3	139
Mine B.....	247	23	85	56	1,105
Smelter.....	391	155	187	95	818
Electrozinc plant.....	138	18	72	21	546
Total.....	834	198	390	175	2,608
		Per cent distribution.			
Mine A.....		4	96	2	98
Mine B.....		21	79	5	95
Smelter.....		45	55	10	90
Electrozinc plant.....		20	80	4	96
Total.....		34	66	6	94
		Rate per 1,000 full-time workers. <sup>a</sup>			
Mine A.....	58	34	793	52	2,397
Mine B.....	247	93	344	227	4,474
Smelter.....	391	394	476	242	2,031
Electrozinc plant.....	138	130	522	152	3,957
Total.....	834	237	468	210	3,127

<sup>a</sup> Based on the average number of full-time workers in the respective divisions.

<sup>1</sup> See the discussion of this point in the article on "Labor turnover in Cincinnati," in MONTHLY LABOR REVIEW, March, 1919, p. 50.

Here again the relatively greater stability of smelter men is strikingly evident. Among active employees what may be called their "stable" rate is higher by far than that of any other group and their "unstable" rate the lowest but one. Among separated employees their "stable" rate is highest of all and their "unstable" rate lowest of all. In general and for the working force as a whole, it appears that the "unstable" ones made up 94 per cent of the separated employees, but only 66 per cent of the active employees.

#### AVERAGE WEEKLY SERVICE RATES.

For both the active and separated groups of employees, it quite obviously holds true that as the period of service increases the number of employees serving such period decreases—and that usually at a progressively increasing rate. The length-of-service figures already presented do not show up this tendency for the reason that the length-of-service records were not tabulated on a scale made up of equal time intervals. For example, in Table 4 it is evident that about the same number of separated employees had service records falling within a range of from 1 to 7 days as had service records falling within a range of from 15 to 30 days—a range, be it observed, which is twice as great. The significant comparison to be made is not the one just indicated—between the number leaving in a 7-day period and the number leaving in a twice-7-day or a ten-times-7-day period—but between the number of "quitters" who had worked one week or less and the "average weekly number" of "quitters." The important item is not so much the number leaving who had, say, 2-weeks-to-1-month service records as it is the number of "quitters" assignable, on the average, to each of the 2 weeks of the 2-weeks-to-1-month period—what may be called, briefly, the "average weekly number" leaving (or working on the active force) in each classified service period.

Such a weekly average is the basis of Table 6 which, with this very important difference, covers the same ground as Table 3. It shows the "average weekly number" and rate per 1,000 full-time workers in each plant division and in the working force as a whole, of the active and separated employees who had served specified periods of time. Here the declining scales of numbers indicate much more truly than do the unsubdivided figures the relative importance of long and short time employees as factors in the turnover situation. Relatively high average weekly separation rates, especially in the shorter time periods, indicate relatively low stability—that is to say, high turnover.

TABLE 6.—AVERAGE WEEKLY NUMBER AND RATE PER 1,000 FULL-TIME WORKERS, IN EACH DIVISION, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED SPECIFIED PERIODS OF TIME.

Average age number of full-time workers.	Mine or plant division.	Employees on pay roll at end of year ("active" employees) who had worked continuously—							Separated employees who had worked continuously—									
		One week or less.	Over 1 week to 2 weeks.	Over 2 weeks to 1 mo.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 year.	Over 1 year to 2 years.	Over 2 years to 3 years.	One week or less.	Over 1 week to 2 weeks.	Over 2 weeks to 1 mo.	Over 3 mos. to 6 mos.	Over 6 mos. to 1 year.	Over 1 year to 2 years.	Over 2 years to 3 years.	Over 3 years to 5 years.		
Average weekly number. <sup>1</sup>																		
58	Mine A.....	5.0	3.0	0.5	2.1	0.77	0.31	0.0	0.02	0.0	15.0	7.5	6.56	1.31	0.50	0.02	0.04	0.0
247	Mine B.....	3.0	13.0	7.0	1.9	.54	1.2	.17	.06	.02	135.0	91.0	36.3	20.5	3.2	.42	.19	.48
391	Smelter.....	31.0	17.0	8.0	3.9	2.2	2.3	.37	.37	.15	195.0	82.5	22.0	7.2	2.1	.52	.31	.13
138	Electrolytic plant.....	14.0	4.0	4.0	1.9	.77	.73	.33	.02	.0	142.0	55.6	11.9	3.5	2.5	.38	.0	.0
834	All employees.....	53.0	37.0	19.5	9.8	4.2	4.5	.87	.46	.17	492.0	236.5	76.8	32.5	8.3	1.35	.54	.13
Average weekly rate per 1,000 full-time workers. <sup>2</sup>																		
58	Mine A.....	86.21	51.72	8.62	36.21	13.27	5.34	0.0	0.34	0.0	344.83	258.64	129.31	113.13	22.59	8.62	0.35	0.0
247	Mine B.....	12.15	52.63	28.74	7.69	2.19	4.86	.69	.24	.08	546.56	449.39	368.42	146.96	83.0	12.96	1.70	.77
391	Smelter.....	78.88	43.26	20.36	9.92	5.60	5.85	.94	.38	.18	284.99	209.92	55.98	18.32	5.34	1.32	.79	.33
138	Electrolytic plant.....	101.45	28.99	28.99	13.77	5.58	5.29	2.39	.15	.0	1,028.98	55.07	40.29	8.62	2.54	1.81	.28	.0
834	All employees.....	63.55	44.36	23.38	11.75	5.04	5.40	1.04	.55	.20	589.93	376.50	283.57	92.09	38.97	9.95	1.62	.65

<sup>1</sup> The average weekly numbers are obtained by dividing the whole numbers in each group (as shown in Table 3) by the approximate number of weeks in the respective groups as follows:

One week or less.....	1
Over 1 week to 2 weeks.....	1
Over 2 weeks to 3 months.....	2
Over 3 months to 6 months.....	13
Over 6 months to 1 year.....	26
Over 1 year to 2 years.....	52
Over 2 years to 3 years.....	52
Over 3 years to 5 years.....	104

<sup>2</sup> Based upon the number of full-time workers for each plant division shown in the first column.



A summary of the figures in Table 6 is presented in Table 7 which shows the total number and "average weekly number" and rate per 1,000 full-time workers, of active and separated employees who had served continuously specified periods of time. The figures show how rapidly the "weekly rate" of separation declines and how entirely out of proportion these separation rates are to the active service distribution rates. It demonstrates also, just as in an article in the April REVIEW<sup>1</sup> it was demonstrated for certain oil refineries, that the great bulk of the turnover is caused by the separation from service of those who had worked less than one month and that after the over-1-to-3-months group is passed the decline in the separation rate is roughly proportionate to the decline in the active service distribution rate. This again seems to indicate that there is no very great amount of avoidable turnover caused by the separation of employees who had served six months or more.

TABLE 7.—TOTAL NUMBER AND AVERAGE WEEKLY NUMBER AND RATE PER 1,000 FULL-TIME WORKERS, OF ACTIVE AND SEPARATED EMPLOYEES WHO HAD SERVED CONTINUOUSLY SPECIFIED PERIODS OF TIME.

Length-of-service period.	Approximate number of weeks in period.	Total number of employees who had served each classified period.	Average weekly number of employees. <sup>a</sup>	Average weekly rate per 1,000 full-time workers. <sup>b</sup>
	1	2	3	4
Active employees.				
One week or less.....	1	53	53.0	63.55
Over 1 week to 2 weeks.....	1	37	37.0	44.36
Over 2 weeks to 1 month.....	2	39	19.5	23.38
Over 1 month to 3 months.....	9	88	9.8	11.75
Over 3 months to 6 months.....	13	55	4.2	5.04
Over 6 months to 1 year.....	26	118	4.5	5.40
Over 1 year to 2 years.....	52	45	.87	1.04
Over 2 years to 3 years.....	52	24	.46	.55
Over 3 years to 5 years.....	104	18	.17	.20
Over 5 years.....		111		
Total.....		588		
Separated employees.				
One week or less.....	1	492	492.0	589.93
Over 1 week to 2 weeks.....	1	314	314.0	376.50
Over 2 weeks to 1 month.....	2	473	236.5	283.57
Over 1 month to 3 months.....	9	691	76.8	92.09
Over 3 months to 6 months.....	13	422	32.5	38.97
Over 6 months to 1 year.....	26	216	8.3	9.95
Over 1 year to 2 years.....	52	70	1.35	1.62
Over 2 years to 3 years.....	52	28	.54	.65
Over 3 years to 5 years.....	104	19	.18	.22
Over 5 years.....		58		
Total.....		2,783		

<sup>a</sup> Column 2 divided by column 1.

<sup>b</sup> Based upon 834 full-time workers.

<sup>1</sup> "Labor policies and labor turnover in the California oil-refining industry," in MONTHLY LABOR REVIEW, April, 1919, pp. 44-46.

[1305]

## NUMBER OF JOBS AFFECTED BY TURNOVER.

As already explained in earlier numbers of this REVIEW, it is possible to arrive at a fairly accurate determination of the "number of equivalent full-time jobs" in any particular group of employees which are always occupied by men who have served one week or less, one to two weeks, and so on—the "number of equivalent full-time jobs" which are, that is to say, affected by varying degrees of turnover. Quite detailed discussions of this matter have appeared in preceding articles in this series<sup>1</sup> and it is therefore treated very briefly here. The steps of the process are indicated in Table 8, which shows the separation frequency distribution of the jobs affected by turnover. The items and relations involved in this table are (with the exception of column 5, which is introduced here) precisely the same as those in Table 8 in the earlier article on turnover in the California oil-refining industry<sup>2</sup> and the figures in the various columns are derived in exactly the same way, the whole analysis resting, as before, upon the assumed mean-length-of-service figures of column 2.

TABLE 8.—SEPARATION FREQUENCY DISTRIBUTION OF JOBS DIRECTLY AFFECTED BY TURNOVER.

Length-of-service period.	Approximate number of weeks in period.	Mean length of service (days).	Corresponding percentage of turnover for one year.	Total number of separated employees who had served each specified period.	Average weekly number of separated employees who had served each specified period.	Total number of 1-man days worked by each group.	Equivalent number of full-time jobs in each group.	Number of equivalent full-time jobs affected per 1,000 full-time workers. <sup>a</sup>	Average weekly number of equivalent full-time jobs in each group.	Average weekly number of equivalent full-time jobs affected per 1,000 full-time workers. <sup>a</sup>
	1	2	3	4	5	6	7	8	9	10
One week or less.....	1	4	9,025	492	492.00	1,968	5.39	6.46	5.39	6.46
Over 1 week to 2 weeks....	1	11	3,218	314	314.00	3,454	9.46	11.34	9.46	11.34
Over 2 weeks to 1 month..	2	22	1,559	473	236.50	10,406	28.51	34.15	14.26	17.10
Over 1 month to 3 months..	9	60	508	691	76.78	41,460	113.59	136.20	12.62	15.13
Over 3 months to 6 months..	13	135	170	422	32.46	56,970	156.08	187.15	12.01	14.40
Over 6 months to 1 year....	26	274	33	216	8.31	59,184	162.15	194.42	6.24	7.48
Over 1 year to 2 years.....	52	548	.....	70	1.35	38,360	105.10	126.02	2.02	2.42
Over 2 years to 3 years.....	52	913	.....	28	.54	25,564	70.04	83.98	1.35	1.62
Over 3 years to 5 years.....	104	1,460	.....	19	.18	8,740	23.95	28.72	.23	.28

<sup>a</sup> Based on 834 full-time workers.

<sup>1</sup> "Labor turnover in the San Francisco Bay region," in MONTHLY LABOR REVIEW, February, 1919, pp. 59-62; "Labor policies and labor turnover in the California oil-refining industry," *Idem.*, April, 1919, pp. 47-51.

<sup>2</sup> MONTHLY LABOR REVIEW, April, 1919, p. 48.

There are set out in parallel columns in Table 9 the standard scale turnover percentages for the different length-of-service groups and the number of equivalent full-time jobs affected by each per 1,000 full-time employees. This table very clearly reveals the relation between the intensity of turnover and the number of jobs affected by it. Thus, it appears that in the over-1-to-3-months, over-3-to-6-months, and over-6-months-to-1-year groups there were 136, 187, and 194 equivalent full-time jobs (per 1,000 full-time workers) affected by turnover intensities of 508, 170, and 33 per cent, respectively. In contrast with this it is evident that, at the heavy-turnover end of the scale, in the 1-week-or-less, over-1-to-2-weeks and over-2-weeks-to-1-month groups there were 6, 11, and 34 equivalent full-time jobs (per 1,000 full-time workers) affected by turnover intensities of 9,025, 3,128, and 1,559 per cent, respectively.

TABLE 9.—ESTIMATED NUMBER OF EQUIVALENT FULL-TIME JOBS AFFECTED BY INTENSITY OF TURNOVER IN EACH LENGTH-OF-SERVICE GROUP.

Length-of-service period.	Yearly per cent of turnover for each group.	Number of equivalent full-time jobs affected.	Number of equivalent full-time jobs affected per 1,000 full-time workers. <sup>1</sup>
One week or less.....	9,025	5.39	6.46
Over 1 week to 2 weeks.....	3,128	9.46	11.34
Over 2 weeks to 1 month.....	1,559	28.51	34.18
Over 1 month to 3 months.....	508	113.59	136.20
Over 3 months to 6 months.....	170	156.08	187.16
Over 6 months to 1 year.....	33	162.15	194.42
Over 1 year to 2 years.....		105.10	126.02
Over 2 years to 3 years.....		70.04	83.98
Over 3 years to 5 years.....		23.95	28.72

<sup>1</sup> Based on 834 full-time workers.

The analysis shown in Table 8, giving the separation frequency distribution of jobs affected by turnover and designed to show the total number and average weekly number of equivalent full-time jobs (per 1,000 full-time workers) affected by varying degrees of turnover, was made separately for each of the four plant divisions. The results (viz., the figures of column 10 of Table 8 for the plant as a whole and the corresponding figures for each plant division) are given in Table 10 which makes a comparison of the number, in each plant division and in the working force as a whole, of equivalent full-time jobs (expressed in rates per 1,000 full-time workers in each group) affected by the percentage of turnover in the various length-of-service groups.

TABLE 10.—NUMBER, IN EACH PLANT DIVISION, OF EQUIVALENT FULL-TIME JOBS (EXPRESSED IN RATES PER 1,000 FULL-TIME WORKERS IN EACH DIVISION) AFFECTED BY TURNOVER IN EACH LENGTH-OF-SERVICE GROUP.

Length-of-service period.	Per cent of turnover.	Weekly number of equivalent full-time jobs affected per 1,000 full-time workers in each division.				
		Mine A.	Mine B.	Smelter.	Electro-zinc plant.	Entire establishment.
One week or less.....	9,025	3.79	5.99	5.45	11.34	6.46
Over 1 week to 2 weeks.....	3,128	7.76	13.56	6.60	16.59	11.34
Over 2 weeks to 1 month.....	1,559	7.76	22.21	12.66	24.24	17.10
Over 1 month to 3 months.....	508	18.57	24.18	9.20	14.20	15.13
Over 3 months to 6 months.....	170	8.35	30.75	6.73	9.28	14.40
Over 6 months to 1 year.....	33	6.47	9.70	4.04	13.60	7.48
Over 1 year to 2 years.....		5.50	2.57	2.02	2.79	2.42
Over 2 years to 3 years.....		1.66	1.95	1.96		1.62
Over 3 years to 5 years.....			.77	1.37		.23

These figures bring out very clearly two very fundamental factors in any labor turnover situation: (1) The intensity of turnover of the separating employees in the various stability groups and (2) the relative size of these groups, i. e., the number of equivalent full-time jobs affected. The figures show the quantitative stability relations between the several plant divisions. For example, for each week (on the average) of the 2-weeks-to-1-month service group, its particular intensity of turnover—1,559 per cent—affected 13 equivalent full-time smelter men's jobs per 1,000 full-time smelter workers in the plant and 24 equivalent full-time electrozinc plant employees' jobs per 1,000 full-time electrozinc plant employees. Judging from these figures it may be said in a general way that the heaviest turnover must be charged up to the electrozinc plant and mine B, with the smelter and mine A running considerably lighter. It is noticeable also that it is the relatively large job groups which are affected by the heavy turnover rates. In other words the relatively large job groups are tied up with under-1-year separations and the relatively small job groups with the over-1-year separations.

#### CONCLUSION.

The general extent of labor instability indicated in the preceding pages is very great. The situation as a whole is described in the statement (based upon Table 1) that for every 1,000 full-time workers 3,129 were hired and 3,633 left during the year reported. The situation was least unfavorable among the smelter men, of whom 2,430 per 1,000 full-time smelter men were hired and 2,573 per 1,000 left. The most unfavorable situation was in mine B where 3,575 per 1,000 were hired and 5,101 per 1,000 left during the year. In the electrozinc plant the showing was also quite unfavorable. Its accessions were 4,109 and its separations 4,283 per 1,000. The

[1308]



opinion expressed by the company that the turnover was greater among the mine workers than among the smelter men is strongly confirmed by the statistical data presented in the preceding pages. The mine superintendent, speaking for the company, stated that among the mine workers the heaviest turnover occurred among muckers and mine-worker's helpers. Unfortunately the data upon which this report is based do not include sufficiently detailed figures to reveal anything about the different occupations except for the very general classification of mine workers and smelter men. The mine superintendent stated that turnover was heavier among mine workers (underground men) than among smelter men (surface men) because it is "more unpleasant to work in the mines" and because employees prefer surface work.

Even if the electrozinc plant and mines had as low a turnover as the smelter, the situation would be none too favorable. A replacement rate of 2,500 includes a vast amount of avoidable turnover. Without doubt the very remote location of the plant at a distance from the labor market accounts for much of it. The company is obliged to depend very largely upon migratory laborers beating their way along the railroad and upon "blanket stiffs" shipped out by employment agencies in some distant city. If these men do "hire on," they often stay only long enough to "make a stake," and then hit the road again. The figures in Table 3 show that except in the smelter there is no such thing as long service tenure, and even there each job is held, on the average, only about five months. In the plant as a whole each job, on the average, is held somewhat less than four months.

The remedy for such a situation as this, in so far as labor conditions in the mining and smelting industry are bad, would seem to be a general and thoroughgoing improvement in working conditions as to safety, sanitation, etc., surrounding the employment of mine workers and smelter men. Quite apart from any humanitarian point of view, if the mining and smelting job is to be made more stable, it would seem that mining and smelting wages should be increased, hours reduced, and working conditions improved, if possible, to a point where the mining and smelting job becomes attractive enough, in comparison with other jobs, to keep its incumbent in it.

Other possible remedial measures are suggested by the figures of Table 1. One would seem to be indicated in the quite disproportionately heavy discharge rate in mine B—1,137 per 1,000—a rate more than twice as heavy as that of any other plant division. The foremen, as already stated, exercise final authority in the matter of discharge, and possibly such exercise of this authority is an important immediate cause of much of the underground turnover. The remedy appears to be either to curtail the discharge powers of the shift and

mucker bosses, or to educate them out of the tradition of hasty and indiscriminate discharging. Again, there is believed to be some significance in the fact—brought out in the same table—that although the turnover in the electrozinc plant was less than that of mine B, its voluntary leaving rate was higher than that of any other plant division. This suggests that an important cause of the turnover here may have been the relatively unfavorable working conditions in the electrozinc plant. This supposition is supported by reports at the plant that of the different surface jobs the electrozinc plant jobs were the least attractive to the men. The remedy is similar to that already suggested, namely, definite improvement in the matter of wages and working conditions, at least to the point where the added inducements bring about a job attraction at least as strong as that which appears to exist in the smelter.

The probable abuse of their authority on the part of the foremen or shift bosses would seem to emphasize the need for some improvement in the direction of a further development and centralization of the company's system of employment, including especially the partial or complete curtailment of the foreman's power of discharge. A definite system—preferably one in which the employee has a part—for the hearing and adjustment of grievances, including particularly appeals from alleged unjust discharges, would probably make for greater satisfaction—and therefore greater stability. It might even be wise to set up a joint committee of employees and company officials, with power to review cases of discharge.

The preventives suggested would be likely to be much more effective if employers and employees acted jointly in working them out and in their practical administration. It is an axiom that labor instability is caused primarily by labor discontent. This discontent can never be completely allayed until and unless the workers are recognized as investors in the industry and therefore as entitled to a share in the determination of the conditions governing their work and in the management of the plant in which they have invested their strength and skill. When there has been established some such joint representation of employers and employees in shop management the workers may reasonably be expected to show greater and more lasting attachment to their jobs.

# DEMOBILIZATION AND RESETTLEMENT IN THE UNITED KINGDOM.<sup>1</sup>

BY BENJAMIN M. SQUIRES.

The British Government's plan for demobilization and resettlement appeared in the January and February, 1919, issues of the MONTHLY LABOR REVIEW. The plan provided for the demobilization of armed forces by trades in accordance with the needs of industry and only as rapidly as industry was prepared to absorb them.

Obviously, less direct control could be exercised by the Government in the demobilization of civilian war workers. The plan contemplated, however, active assistance by the Government in the reorganization of industry.

In connection with the plan of demobilization and resettlement, the Government adopted a temporary system of noncontributory out-of-work donations both for men demobilized from the forces and for civilian workers.

The extent of the problem of demobilization and resettlement in the United Kingdom may be indicated in a measure by changes in employment during the war. No exact information is available as to the state of employment in all industries at the signing of the armistice. However, estimates and figures compiled for earlier dates help to an appreciation of the situation.

The Board of Trade returns for January, 1918, summarize the employment of that date as compared with July, 1914:

SUMMARY OF THE STATE OF EMPLOYMENT IN JANUARY, 1918, COMPARED WITH JULY, 1914, AND ENLISTMENT IN THE UNITED KINGDOM, JULY, 1914, TO JANUARY, 1918.

Item.	Males.						Females.		
	Estimated number employed, July, 1914.	Left to join the forces.	Employed in January, 1918.	Consequent net replacement (+) or displacement (-).	Expansion (+) or contraction (-) since July, 1914.		Estimated number employed, July, 1914.	Expansion (+) or contraction (-) since July, 1914.	
					Numbers.	Per cent.		Numbers.	Per cent.
Total industries	6,163,000	2,501,000	4,947,000	+1,285,000	-1,216,000	- 19.7	2,175,500	+533,000	+ 24.5
Gas, water and electricity under local authorities.....	63,000	21,000	55,000	+ 13,000	- 8,000	- 13.2	600	+ 4,500	+ 743.5
Government establishment..	75,000	42,000	256,000	+ 223,000	+ 181,000	+241.9	2,000	+207,500	+10,127.1
Total.....	6,301,000	2,564,000	5,258,000	+1,521,000	-1,043,000	- 16.6	2,178,100	+745,000	+ 34.2

The following statement prepared by the Ministry of Labor shows the numbers employed in April, 1918, in metal, chemical, and rubber industries for Ministry of Munitions, also on work for Admiralty

<sup>1</sup> Unless otherwise indicated, all figures used in this summary are taken from the weekly reports on demobilization and resettlement submitted to the Controller General.

(including shipbuilding), War Office, and other Government Departments:<sup>1</sup>

*Estimated number of persons employed, April, 1918.*

**Ministry of Munitions:**

Gun ammunition.....	456,400
Ordnance.....	86,600
Rifles, machine guns, trench warfare, other than chemicals.....	132,100
Explosives and chemicals.....	120,600
Aeronautical supplies.....	183,700
Mechanical warfare.....	15,600
Railway materials.....	22,300
Optical munitions and glass.....	9,500
Mechanical transport.....	59,800
Iron and steel.....	217,600
Nonferrous metals.....	44,300
Construction engineering, etc.....	107,500
Machine tools.....	27,900
Gauges, tools, screws, etc.....	55,300
Inspection.....	57,000

**Admiralty:**

Shipbuilding and repairs—

Private yards.....	372,030
Royal dockyards.....	60,070

Guns, ammunition, mines, etc.....	440,300
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War Office, miscellaneous.....	154,300
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Other British Government work.....	158,500
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Allies.....	42,200
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Total.....	2,823,000
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The Board of Trade returns of employment for April, 1918, show the extent to which substitute labor had been employed since July, 1914. The figures given are net, arrived at after making allowance for those industries in which the number of men or women employed showed an actual decrease.

**INCREASE IN EMPLOYMENT OF FEMALES AND REPLACEMENT OR DISPLACEMENT OF MALES SINCE JULY, 1914.**

Industrial group.	Increase in the employment of females since July, 1914.	Net replacement (+) or displacement (—) of male labor since July, 1914.
Industries (other than Government establishments and metal and chemical trades).....	89,000	+ 496,000
Gas, water, electricity (under local authorities).....	4,000	+ 10,000
Transport (excluding tramways under local authorities).....	78,000	+ 108,000
Tramways (under local authorities).....	18,000	+ 7,000
Finance and banking.....	63,000	+ 28,000
Commerce.....	354,000	+ 203,000
Professions (mainly clerks).....	57,000	+ 20,000
Hotels, theaters, etc.....	25,000	+ 46,000
Civil service (post office).....	59,500	— 700
Other civil service.....	99,500	+ 49,500
Other services under local authorities.....	31,000	+ 7,000
Total.....	878,000	+1,064,000

<sup>1</sup>Not all industries are included and it is estimated that the total number of employees has exceeded 3,000,000.



Commenting on the above figures the civil war workers' committee of the Ministry of Reconstruction observes: "Two-thirds of the male replacements have been effected by (1) the natural growth of the male population; (2) the entry into employment of boys at an unusually early age; (3) the return of men from the forces. It is improbable that any considerable number of these will be displaced at the end of the war. The replacements include, too, a large number of older men who have either deferred retirement or have returned to work after having retired. It may be assumed that these will drop out in the normal course. The number of male substitutes who are likely to be left without employment is, therefore, not serious. \* \* \* With regard to women the position is more critical \* \* \* and is one of great importance and difficulty."<sup>1</sup>

Reporting in March, 1918, on "The position of women in industry after the war," the Bristol Association for Industrial Reconstruction estimates the number of women in industrial occupations to be 4,713,000 or an increase of 1,426,000 over the number on July, 1914. Of this increase it is estimated that 1,413,000 were directly replacing men. The number of women employed solely on munitions work was estimated to be 704,000 out of a total of 1,400,000 employed in the production and distribution of commodities for the British and Allied Governments. The following table taken from the report compares by industries the number employed:

NUMBER OF WOMEN EMPLOYED IN JULY, 1914, AND OCTOBER, 1917.

[The figures given in the table do not include domestic workers, women employed in certain small workshops and workrooms, or women working in naval, military, or Red Cross hospitals. In prewar days domestic service provided employment for a far larger number of women than any other form of occupation. The number so employed in 1911 was 1,620,000. It is estimated that since the outbreak of war there has been a displacement of some 400,000 women from domestic service and small workshops.]

Industrial group.	Number employed in—	
	July, 1914.	October, 1917.
Controlled and private industries.....	2,176,000	2,706,000
Government establishments.....	2,000	216,000
Gas, water, and electricity (local authorities).....	600	4,600
Agriculture (Great Britain), permanent labor.....	180,000	189,000
Transport, including tramway services (estimated).....	18,200	111,200
Finance (banking, insurance, etc.).....	9,500	67,500
Commerce.....	496,000	831,000
Professions.....	67,500	89,500
Hotels, public houses, cinemas, theaters, etc.....	176,000	200,000
Civil service (post office).....	60,500	107,000
Other civil services.....	4,500	51,000
Other services under local authorities.....	196,200	226,200

<sup>1</sup> Numbers vary according to the season of the year.

The report goes on to state that "Presumably it will be possible for 400,000 women to return to domestic service or small workshops, from which they have been withdrawn either by the attraction of higher remuneration or the needs of the country." It was antici-

<sup>1</sup> Final Report Civil War Workers' Committee, Ministry of Reconstruction, p. 1.

pated, however, that the 704,000 women engaged on munitions work would either have to seek other employment or cease to be industrial workers and that a considerable number of the 696,000 engaged on Government work other than munitions would no longer be needed.

The first weekly report on demobilization and resettlement prepared under direction of the Controller General and submitted for the week ending December 28, 1918, states that "An effort has been made to get the 'long view' as to the number of civilian workers which will be demobilized from war industry and for whom work will be required. Reliable and up-to-date information as to this will not be available for some considerable time yet. A questionnaire has been issued to about 45,000 firms, but these are only being received slowly at the (employment) exchanges, and when a sufficient number have come to hand they will have to be tabulated and considered. \* \* \* Probably over 3,000,000 people have been employed on war work for the various departments. It is difficult to form any reliable estimate as to the numbers who will be dispensed with, but \* \* \* it looks as though from 1,000,000 to 1,500,000 will be affected by the suspension of war contracts."

In the demobilizing of the armed forces the Government has had exact figures to deal with. The numbers to be retained by the Army and Royal Air Force, however, were not determined until late in February, 1919, and the number to be retained by the Royal Navy had not been announced up to March 8, 1919. During December, 1918, and January, 1919, demobilization proceeded in accordance with the original plan of releasing demobilizers and pivotal men in advance of others, but following the general scheme of trade priority and industrial classification. With the announcement on January 30, 1919, of the Government's decision as to the constitution of the army of occupation, in effect that all men under the age of 37 who joined the Army or Air Force after January 1, 1916, would be retained for that service, the system of selection of pivotal men was terminated. "The rest of the forces will be demobilized so rapidly that no system of individual selection by the civil authorities could be effective. Pivotal men whose names have gone forward will receive the highest industrial priority; next will come slip and contract men."<sup>1</sup>

The numbers demobilized up to March 6, 1919, together with the strength at November 11, 1918, and the number to be retained are shown in the following tables:

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<sup>1</sup> Instructions No. 54 to Local Advisory Committees by the Ministry of Labor.

## DEMOBILIZATION OF HIS MAJESTY'S FORCES, FOR WEEK ENDING MAR. 6, 1919.

## MEN.

Item.	Navy.		Army.		Royal Air Force.		Total.	
	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.
Strength at Nov. 11, 1918.....	37,850	360,000	162,866	3,583,258	1 29,000	1 250,000	229,716	4,193,258
Number to be retained (ap- proximate figure).....	( <sup>1</sup> )	( <sup>2</sup> )	53,000	860,000	6,508	75,342	( <sup>3</sup> )	( <sup>3</sup> )
Total number to be demobil- ized (approximate).....	( <sup>2</sup> )	( <sup>2</sup> )	109,866	2,723,258	22,492	174,658	( <sup>3</sup> )	( <sup>3</sup> )
Total number demobilized to Mar. 6, 1919.....	5,420	127,814	45,617	1,740,593	5,427	124,706	56,464	1,993,113
Number demobilized during week ended Mar. 6, 1919.....	608	10,865	4,080	126,360	721	7,784	5,409	145,009
Number demobilized during week ended Feb. 27, 1919.....	431	13,449	4,109	140,740	743	11,063	5,283	165,252

## WOMEN.

Item.	W. R. N. S. <sup>3</sup>		Q. M. A. A. C. <sup>3</sup>		W. R. A. F. <sup>3</sup>		W. F. C. <sup>3</sup>		Total.	
	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.	Offi- cers.	Other ranks.
Strength at Nov. 11, 1918.....	415	4,300	1,125	42,200	500	23,000	.....	7,670	2,040	77,260
Total number demobilized at Mar. 6, 1919.....	85	930	40	5,422	.....	.....	.....	3,101	125	9,453
Total number demobilized week ending Mar. 6, 1919.....	.....	.....	.....	436	.....	.....	.....	111	.....	547
Total number demobilized week ending Feb. 27, 1919.....	.....	.....	.....	924	.....	.....	.....	74	.....	998

<sup>1</sup> 444 officers and 4,152 other ranks have also been returned to Army units.<sup>2</sup> Figures not yet available.<sup>3</sup> These initials stand, respectively, for Women's Royal Naval Service, Queen Mary's Army Auxiliary Corps, Women's Royal Air Force, and Women's Forestry Corps.

## NUMBER OF NAMES OF DEMOBILIZERS AND PIVOTAL MEN RECEIVED, RELEASE ORDERS ISSUED, AND THE ACTUAL NUMBERS RELEASED UP TO MAR. 6, 1919.

Item.	Number of names received.	Release orders issued.	Number released.
<i>Army and Royal Air Force.</i>			
Demobilizers.....	59,894	48,019	31,951
Pivotal.....	211,310	192,032	52,920
Total.....	271,204	240,051	84,871
<i>Royal Navy.</i>			
Demobilizers.....	2,999	2,771	12,000
Pivotal.....	14,857	12,915	
Total.....	17,856	15,686	12,000

<sup>1</sup> The division of these figures between demobilizers and pivotal men not available.

Of the total to be demobilized from the forces, the following percentages had been demobilized March 6, 1919:

## PERCENTAGE DEMOBILIZATION UP TO MAR. 6, 1919.

Service.	Officers.	Other ranks.	Total.
Army.....	41.3	63.8	62.9
Royal Air Force.....	26.1	73.7	68.3

Out of the total of 2,049,577 demobilized, the dispersal certificates of 1,538,278 have been analyzed according to industrial groups as follows:

DEMOBILIZATION OF HIS MAJESTY'S FORCES BY INDUSTRIAL GROUPS AS AT  
MAR. 6, 1919.

Industrial group.	Army and Air Force (officers and other ranks).	Navy.	Total.
Agriculture.....	136,599	7,050	143,649
Seamen and fishermen.....	15,262	20,520	35,782
Coal and shale mining.....	203,198	8,787	211,985
Food, drink, and tobacco.....	32,666	2,001	34,667
Textile trades.....	47,214	2,752	49,966
Shoe and leather trades.....	25,905	1,228	27,133
Shipbuilding.....	18,463	3,400	21,863
Engineering and metal trades.....	133,999	20,283	154,282
Brick and building trades.....	128,975	7,696	136,671
Railways and transport.....	122,783	10,120	132,903
Employees of public authorities.....	62,779	5,199	67,978
General laborers.....	47,036	4,376	51,412
Commercial and clerical.....	175,618	11,489	187,107
Domestic and personal.....	29,657	1,846	31,503
Professional men.....	14,759	357	15,116
Students and teachers.....	35,366	983	36,349
Other groups.....	187,749	12,163	199,912
Total.....	1,418,028	120,250	1,538,278

An analysis has also been made of approximately the first 2,000,000 civil employment forms received from the forces, showing the distribution by occupation.

NUMBER AND PER CENT OF CIVIL EMPLOYMENT FORMS RECEIVED FROM THE  
FORCES, BY OCCUPATIONS.

Occupation.	Number.	Per- cent- age.	Occupation.	Number.	Per- cent- age.
Carpenters, joiners, bricklayers, etc.....	178,683	9.0	Agriculture.....	145,772	7.0
Work of construction.....	7,104	.3	Mines and quarries.....	56,465	2.7
Sawmilling and machine wood- work.....	21,193	1.0	Brushes, brooms, etc.....	1,091	.05
Shipbuilding.....	37,810	2.0	Pottery and glass.....	11,129	.5
Engineering.....	278,655	13.0	Paper, prints, etc.....	35,332	1.7
Construction of vehicles.....	16,009	.8	Cotton.....	51,350	2.5
Cabinetmaking, etc.....	16,271	.8	Wool and worsted.....	17,198	.8
Manufacture of metals.....	22,395	1.1	Silk, flax, linen, etc.....	36,460	1.8
Manufacture of electrical appa- ratus, etc.....	8,807	.43	Other workers in dress.....	35,857	1.7
Miscellaneous metal trades.....	8,269	.4	Boots and shoes.....	35,278	1.7
Precious metals, etc.....	14,164	.6	Food.....	52,448	2.5
Bricks and cement.....	6,255	.3	Tobacco, drink, and lodging.....	13,915	.7
Chemicals.....	11,303	.6	Gas, water, etc.....	13,077	.6
Rubber and waterproof goods.....	3,495	.17	General laborers.....	44,860	2.2
Ammunition and explosives.....	2,388	.1	Others (excluding general labor- ers).....	129,872	6.3
Leather, boots and shoes.....	12,987	.6	Government defense, professional.....	164,964	8.0
Wood, furniture, etc.....	3,203	.15	Miscellaneous.....	54,020	2.6
Domestic offices and services.....	77,869	4.0	Time expired, soldiers and sailors.....	4,995	.2
Commercial occupations.....	160,515	8.0		2,062,976	100.0
Conveyance of men, goods, etc.: On railways.....	74,775	3.6			
Over roads, seas, etc.....	196,743	9.5			

Information is not available as to the total number of civilian war workers demobilized. For Government and national munition fac-



tories, however, demobilization figures have been analyzed as of January 11, 1919, and are presented in the following table, together with the numbers employed in such factories on or about November 11, 1918, and the percentage reduction as of January 4 and 11, 1919. It will be observed that by January 11, 1919, 60 per cent had been demobilized.

DEMOBILIZATION OF MUNITION WORKERS FROM GOVERNMENT AND NATIONAL FACTORIES.

Kind of factory.	Number employed on or about Nov. 11, 1918.			Number employed on Jan. 11, 1919.			Percentage reduction since Nov. 11, 1918.					
	Males.	Females.	Total.	Males.	Females.	Total.	Males.		Females.		Total.	
							Jan. 4.	Jan. 11.	Jan. 4.	Jan. 11.	Jan. 4.	Jan. 11.
Gun ammunition:												
Manufacture.....	39,567	40,263	79,830	18,247	5,882	24,129	48	59	82	82	65	75
Filling.....	25,724	70,372	96,096	13,920	15,940	29,860	46	45	75	77	67	69
Ordnance.....	15,496	4,635	20,131	10,533	722	11,255	28	31	80	84	40	44
Small arms and machine guns.....	8,851	1,769	10,620	6,928	687	7,615	17	21	59	61	23	28
Small-arms ammunition.....	4,427	10,142	14,569	2,467	4,052	6,519	37	44	54	60	46	55
Explosives <sup>1</sup> .....	17,832	17,393	35,225	9,597	5,274	14,871	46	46	64	69	55	57
National aircraft factories.....	12,093	6,479	18,572	3,076	4,214	7,290	.....	74	.....	34	.....	60
Antigas factories.....	759	11,753	12,512	521	6,854	7,375	32	31	39	40	39	41
Woolwich, miscellaneous.....	7,703	2,731	10,434	6,242	2,327	8,569	16	18	13	14	15	17
Other national factories.....	3,660	3,800	7,460	2,241	1,658	3,899	37	39	50	56	44	48
Total.....	136,112	169,337	305,449	73,772	47,610	121,382	39	46	69	73	55	60
Included in above:												
Woolwich, all departments.....	39,581	24,360	63,941	31,433	14,395	45,828	17	17	32	41	23	26
National projectile factories.....	24,033	22,826	46,859	8,513	2,432	10,945	58	64	87	89	72	76
National shell factories.....	5,291	13,073	18,364	1,168	997	2,165	72	77	88	92	83	86

<sup>1</sup> Figures for Jan. 10.

<sup>2</sup> Incomplete.

The Government's out-of-work donation plan replaced, during the period of its effectiveness, the unemployment insurance provided by the acts of 1911 and 1916 and was made applicable as well to what had previously been classed as "uninsured trades." The Government is thus in a position to keep a very close check on employment. In practice donation policies are "issued" to those demobilized from the forces or from Government or national factories and to other civilian employees out of work. The policies are "lodged" during the period of unemployment at the employment exchanges. Policies "remaining lodged," therefore, represent unemployments and, owing to the scope of the plan, probably most of the unemployment. The following table shows the "policies remaining lodged," or the unemployment, by weeks, for the period November 29, 1918, to February 28, 1919. It will be observed that there has been a steady increase in the volume of unemployment from 69,803 on November

29, 1918, to 948,620 on February 28, 1919. It is significant, however, that of the 1,857,010 demobilized from the forces by February 28, 1919, donation policies remained lodged for but 166,257:

## UNEMPLOYMENT POLICIES REMAINING LODGED.

Week ending—	Men.		Total men.	Boys.	Women.		Total women.	Girls.	Grand total.
	Civil-ians.	H. M. forces.			Civil-ians.	H. M. forces.			
1918.									
Nov. 29.....	16,636	4,698	21,334	2,088	45,107	11	45,118	1,263	69,803
Dec. 6.....	31,768	11,264	43,032	4,801	77,824	62	77,886	2,864	128,583
Dec. 13.....	43,989	15,547	59,536	8,015	122,228	81	122,309	6,909	196,769
Dec. 20.....	63,413	18,604	82,017	11,128	167,009	37	167,046	9,170	269,361
1919.									
Jan. 3.....	101,390	23,938	125,328	16,988	224,955	50	225,005	13,374	380,605
Jan. 10.....	119,315	31,543	150,858	16,462	265,479	88	265,567	16,365	449,252
Jan. 17.....	139,113	40,400	179,513	18,131	303,813	131	303,944	18,018	519,606
Jan. 24.....	156,671	47,209	203,880	20,543	343,742	170	343,912	22,259	590,594
Jan. 31.....	177,361	53,316	230,677	22,562	399,864	238	400,102	25,362	678,703
Feb. 7.....	191,371	63,277	254,648	24,538	427,734	380	428,114	26,790	734,090
Feb. 14.....	212,205	84,298	296,503	26,752	452,810	394	453,204	28,183	804,642
Feb. 21.....	218,278	132,471	350,749	28,195	470,294	841	471,135	31,544	881,623
Feb. 28.....	227,836	165,429	393,265	28,019	494,471	828	495,299	32,037	948,620

No analysis of unemployment by industries was made under the out-of-work donation plan until the week ending December 13, 1918. Beginning with the week of January 3, 1919, an analysis has been made for each week. The following table presents the analysis for 10 weeks:

## NUMBER OF CIVILIAN AND H. M. FORCES OUT-OF-WORK DONATION POLICIES REMAINING LODGED AT ALL LOCAL OFFICES.

Industry.	Dec. 13, 1918.	Policies remaining lodged in 1919.									
		Jan. 3.	Jan. 10.	Jan. 17.	Jan. 24.	Jan. 31.	Feb. 7.	Feb. 14.	Feb. 21.	Feb. 28.	
Building.....	10,913	24,450	28,539	31,773	33,739	36,492	40,629	45,803	52,415	55,904	
Construction of works.....	1,691	3,501	4,106	4,967	5,400	5,964	6,447	6,926	7,459	7,660	
Shipbuilding.....	3,058	6,754	7,820	10,024	10,397	12,379	12,801	15,273	14,522	16,146	
Engineering and iron founding	59,599	119,517	141,011	159,143	172,454	184,448	187,152	204,616	197,015	200,390	
Construction of vehicles.....	3,154	5,836	5,573	7,200	8,508	9,808	10,530	10,347	12,309	11,715	
Sawmilling.....	236	464	561	813	989	1,127	1,148	1,190	1,702	2,458	
Other insured workpeople.....	.....	357	458	365	365	441	434	437	358	357	
<b>Total, under 1911 act....</b>	<b>78,651</b>	<b>160,879</b>	<b>188,068</b>	<b>214,285</b>	<b>231,852</b>	<b>250,659</b>	<b>259,141</b>	<b>284,592</b>	<b>285,780</b>	<b>294,630</b>	
Ammunition and explosives...	28,791	41,534	45,143	46,698	50,533	52,819	55,110	56,019	41,913	37,308	
Chemicals.....	1,832	3,477	4,355	4,059	4,796	5,102	5,712	5,964	6,208	6,315	
Iron and steel manufacture....	1,802	3,940	5,666	7,143	7,134	7,742	5,920	6,749	6,679	5,991	
Tinplate manufacture.....	141	294	378	369	396	370	380	375	299	275	
Wire manufacture.....	348	1,392	900	1,206	1,236	1,349	1,306	1,455	1,639	1,683	
Anchors, chains, nails, bolts, nuts, rivets, etc.....	407	907	1,086	1,157	1,734	1,746	1,939	1,818	2,539	1,663	
Brass.....	1,072	1,487	1,830	1,889	2,145	2,152	2,424	2,458	1,919	1,326	
Copper, tin, lead, zinc, etc....	503	706	910	1,177	1,785	1,944	2,050	2,429	2,735	2,660	
Hardware and hollow ware....	2,475	4,652	5,400	5,933	6,593	7,360	7,803	8,589	7,650	6,135	
Tools, files, saws, implements, cutlery.....	178	422	373	423	675	892	931	962	998	1,013	
Clocks, plate, jewelry.....	101	209	262	367	437	477	451	657	662	612	
Needles, pins, typefounding, dies, etc.....	164	391	396	388	567	612	735	867	800	642	
Electrical, scientific, etc., appliances, and apparatus....	826	1,595	2,382	2,987	3,052	3,795	4,063	4,464	4,411	4,172	
Miscellaneous metal.....	290	1,445	670	834	840	797	1,059	1,163	1,427	1,265	
Leather and leather goods.....	942	1,939	2,862	3,383	3,286	3,432	3,917	4,819	3,842	3,756	

**NUMBER OF CIVILIAN AND H. M. FORCES OUT-OF-WORK DONATION POLICIES  
REMAINING LODGED AT ALL LOCAL OFFICES—Concluded.**

Industry.	Dec. 13, 1918,	Policies remaining lodged in 1919.								
		Jan. 3.	Jan. 10.	Jan. 17.	Jan. 24.	Jan. 31.	Feb. 7.	Feb. 14.	Feb. 21.	Feb. 28.
Brick, tile, and artificial building material.....	429	660	720	1,025	1,176	1,040	1,092	1,148	1,042	2,128
Sawmilling, machined wood-work, and wooden cases.....	2,305	4,571	5,361	6,695	7,109	7,696	8,112	8,297	7,107	6,164
Rubber and manufactures thereof.....	1,167	2,066	2,550	2,955	3,460	3,663	3,697	4,074	3,877	3,547
Total, under 1916 act....	43,773	71,687	81,244	88,688	96,954	102,988	106,701	112,307	95,747	86,655
Total, 1911 and 1916 acts.	122,424	232,566	269,312	302,973	328,806	353,647	365,842	396,899	381,527	381,285
Total, uninsurable occupations.....	74,355	148,129	179,940	216,633	261,788	325,056	368,248	407,743	500,094	567,335
Grand total.....	196,779	380,695	449,252	519,606	590,594	678,703	734,090	804,642	881,621	948,620

It will be observed from the above table that of the three groups of industries, the greatest increase of unemployment is shown in the uninsurable occupations. On this point the Controller of Statistics observes: "It should however be noted that workers in the insurable munitions industries are now being classified in larger numbers under their normal peace-time occupations, which in the case of women are largely uninsured trades. The rapid rise in the uninsurable occupations is accordingly not to be attributed wholly to lack of employment in these occupations but is partly occasioned by return of workers from munitions industries."

The analysis of unemployment in the uninsured trades is incomplete. The latest figures available are for the week ending February 21, 1919, and show the distribution of the 500,094 policies remaining lodged on that date.

**NUMBER OF OUT-OF-WORK DONATION POLICIES REMAINING LODGED ON FRIDAY,  
FEB. 21, 1919, FOR THE UNINSURED TRADES, GROUPED ACCORDING TO THE PRIN-  
CIPAL TRADES.**

Industry group.	Civilians.				H. M. Forces.		Total.
	Men.	Boys.	Wom- en.	Girls.	Men.	Wom- en.	
Domestic offices and services.....	2,881	198	54,505	2,237	4,707	245	64,773
Commercial.....	4,730	762	15,534	2,427	6,283	86	29,822
Conveyance of men, goods, and messages.....	12,974	2,550	16,115	954	22,433	48	55,074
Agriculture.....	4,004	203	3,753	115	1,518	32	9,625
Mines and quarries.....	3,393	346	359	10	7,218	2	11,328
Paper, prints, books, and stationery.....	1,571	155	5,622	345	964	8	8,685
Textiles:							
Cotton.....	6,538	1,437	44,380	4,707	2,037	8	59,107
Woolen and worsted.....	769	200	3,899	152	359	7	5,386
Other textiles (including dyeing and fin- ishing).....	10,055	1,437	19,079	1,702	1,697	8	33,978
Dress.....	2,465	864	26,650	1,534	1,975	21	33,509
Food, drink, and tobacco.....	1,175	358	13,606	598	1,193	40	16,970
Shop assistants.....	1,339	166	22,783	1,671	1,816	79	27,854
General laborers, factory workers, etc., other uninsured occupations.....	29,778	5,076	70,216	5,383	33,355	195	144,003
Total.....	81,672	13,752	296,501	21,835	85,555	779	500,094



The percentage of unemployment in the insured trades is shown by industries and by weeks during the period December 6, 1918, to February 28, 1919, in the table below. Information upon which to base percentages for the uninsured trades is apparently not available. It will be observed that in industries under the 1911 act, unemployment increased from 2.32 per cent on December 6, 1918, to 11.82 per cent on February 28, 1919. In industries under the 1916 act the increase was less—from 3.06 to 8.09 per cent.

PERCENTAGE OF UNEMPLOYMENT IN THE INSURED TRADES.

Industry.	1918			1919								
	Dec. 6.	Dec. 13.	Dec. 20.	Jan. 3.	Jan. 10.	Jan. 17.	Jan. 24.	Jan. 31.	Feb. 7.	Feb. 14.	Feb. 21.	Feb. 28.
Building.....	1.98	2.36	3.28	5.30	6.18	6.88	6.84	7.40	8.24	9.29	10.63	11.34
Construction of works.....	1.67	1.81	2.27	3.76	4.41	5.33	5.37	5.93	6.41	6.89	7.42	7.62
Shipbuilding.....	.79	1.10	1.47	2.43	2.82	3.61	3.91	4.65	4.81	5.74	5.46	6.07
Engineering and iron found- ing.....	2.99	4.30	5.90	8.62	10.17	11.48	12.21	13.05	13.25	14.48	13.95	14.18
Construction of vehicles.....	.66	1.92	2.43	3.56	3.40	4.30	5.07	5.85	6.28	6.17	7.34	6.99
Sawmilling.....	9.20	2.33	2.49	4.58	5.55	8.03	9.11	10.38	10.58	10.97	15.68	22.65
Other insured workpeople.....			.63	1.02	1.30	1.04	.92	1.11	1.09	1.10	.90	.90
Total industries under 1911 act.....	2.32	3.24	4.43	6.62	7.74	8.82	9.31	10.06	10.40	11.43	11.47	11.82
Ammunition and explosives	9.05	11.25	13.28	17.10	18.58	19.04	19.90	20.80	21.70	22.06	16.51	14.69
Chemicals.....	1.46	1.95	2.99	3.77	4.72	4.40	4.57	4.56	5.44	5.68	5.92	6.02
Iron and steel manufacture.....	.60	1.09	1.10	2.38	3.43	4.32	4.36	4.73	3.62	4.12	4.08	3.66
Tinplate manufacture.....	.60	1.11	1.38	2.32	2.99	2.92	2.70	2.22	2.59	2.56	2.04	1.87
Wire manufacture.....	1.17	1.43	1.47	5.73	3.71	4.97	4.96	5.42	5.84	5.84	6.58	6.76
Anchors, chains, nails, bolts, nuts, rivets, etc.....	1.03	1.63	2.27	3.63	4.34	4.63	7.38	7.93	8.25	7.73	10.80	7.07
Brass.....	2.04	3.94	3.94	5.46	6.72	6.94	8.16	8.19	9.22	9.35	7.30	5.05
Copper, tin, lead, zinc, etc.....	3.11	1.73	1.89	2.42	3.12	4.00	6.00	6.54	6.89	8.17	9.20	8.95
Hardware and hollow ware.....	.63	2.42	3.01	4.55	5.28	5.80	6.46	7.21	7.64	8.41	7.49	6.01
Tools, files, saws, imple- ments, cutlery.....	.36	.80	.91	1.91	1.68	1.99	3.33	4.40	4.59	4.74	4.92	4.99
Clocks, plate, jewelry.....	.43	.80	1.16	1.65	2.07	2.90	3.76	4.11	3.88	5.66	5.70	5.27
Needles, pins, typefound- ing, dies, etc.....	.78	1.58	2.31	3.76	3.81	3.73	5.60	6.05	7.26	8.57	7.91	6.35
Electrical, scientific, etc., appliances and apparatus.....	2.01	1.58	1.81	3.04	4.55	5.70	5.65	7.03	7.52	8.27	8.17	7.73
Miscellaneous metal.....	4.32	4.44	6.33	9.73	10.27	12.78	11.85	11.24	14.94	16.41	20.13	17.84
Leather and leather goods.....	1.06	1.80	2.70	3.71	5.48	6.47	5.57	5.81	6.64	8.16	6.51	6.36
Brick, tile, and artificial building material.....	.79	1.79	2.91	2.75	3.00	4.26	3.74	3.31	3.47	3.63	3.31	6.77
Sawmilling, machined woodwork, and wooden cases.....	1.80	3.19	3.98	6.33	7.42	9.27	9.03	9.78	10.30	10.54	9.03	7.83
Rubber and manufactures thereof.....	1.40	2.24	2.49	3.96	4.89	5.67	6.31	6.68	6.74	7.42	7.07	6.46
Total industries under 1916 act.....	3.06	4.27	4.96	6.91	7.92	8.61	9.05	9.62	9.96	10.49	8.94	8.09
Total industries, 1911 and 1916 acts.....	2.54	3.54	4.59	5.90	7.80	8.76	9.23	9.93	10.27	11.14	10.71	10.71

Another indication of the trend of unemployment during the period of resettlement is the number of unemployment policies remaining lodged per 10,000 of sugar-buying population, which, as shown in the statement below, increased from 17.1 on November 29, 1918, to 220.0 on February 28, 1919.



*Out-of-work donation policies lodged per 10,000 of sugar-buying population of the United Kingdom.*

Nov. 29, 1918.....	17.1
Dec. 6, 1918.....	30.1
Dec. 13, 1918.....	46.0
Dec. 20, 1918.....	63.0
Jan. 3, 1919.....	88.5
Jan. 10, 1919.....	104.0
Jan. 17, 1919.....	120.0
Jan. 24, 1919.....	136.0
Jan. 31, 1919.....	157.0
Feb. 7, 1919.....	170.0
Feb. 14, 1919.....	187.5
Feb. 21, 1919.....	205.0
Feb. 28, 1919.....	220.0

The duration of unemployment is summarized in the following analysis according to the periods for which payments have been made during the week ending February 28, 1919:

**POLICIES LODGED, ANALYZED ACCORDING TO PERIOD FOR WHICH PAYMENTS HAVE BEEN MADE DURING WEEK ENDING FEB. 28, 1919.**

Period.	Number of policies on which payments were made for each period, of—				Total.
	Men.	Boys.	Women.	Girls.	
<b>Civilians:</b>					
1-48 days.....	156,736	20,102	303,456	20,682	500,976
49-60 days.....	25,642	2,544	67,385	4,079	99,650
61-77 days.....	21,179	1,981	79,700	3,114	105,974
78 days.....	1,830	51	9,768	272	11,921
Policies lodged but no payment made.....	22,449	3,341	34,162	3,890	63,842
Total.....	227,836	28,019	494,471	32,037	782,363
<b>His Majesty's Forces:</b>					
1-60 days.....	119,292		715		120,007
61-120 days.....	13,094		25		13,119
Policies lodged but no payment made.....	33,043		88		33,131
Total.....	165,429		828		166,257
Grand total.....					948,620

Information is not available on which to base a comparison of unemployment in all industries as between the period of demobilization and before or during the war. The following table, however, shows the percentage of unemployment in the trades insured under the 1911 act for the years 1913 to 1917 and for July and September, 1918.

<sup>1</sup> Great Britain only.

## PERCENTAGE OF UNEMPLOYMENT IN INSURED TRADES (1911 ACT), 1913 TO 1918

Year.	1913		1914		1915		1916		1917		1918	
	Dec.	Mean for year.	Dec.	Mean for year.	Dec.	Mean for year.	Dec.	Mean for year.	Dec.	Mean for year.	July.	September.
Building.....	6.9	5.1	5.0	5.20	2.80	2.40	1.23	1.20	0.81	0.84	0.55	0.51
Construction of works.....					.47	.83	.34	.40	.42	.44	.56	.48
Shipbuilding.....	3.9	3.4	2.1	3.75	.57	.75	.32	.36	.34	.35	.25	.23
Engineering and Iron founding.....					.38	.57	.45	.43	.76	.65	.69	.72
Construction of vehicles.....	2.9	2.5	2.9	3.50	.59	.80	.40	.50	.43	.40	.28	.26
Sawmilling.....	3.3	2.5	1.8	3.30	.68	1.04	.44	.57	.52	.56	.46	.40
Other insured workpeople..	1.7	1.4	1.0	1.80	.29	.40	.14	.17	.11	.12	.07	.04
Total.....	4.6	3.6	3.3	4.2	1.14	1.20	.65	.60	.67	.60	.57	.57

A further indication of the trend of unemployment appears from the following table of the percentage of trade-union members unemployed, 1908 to 1918:

## PERCENTAGE OF TRADE-UNION MEMBERS UNEMPLOYED, 1908 TO 1918 (ALL TRADE-UNIONS MAKING RETURNS).

	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	<sup>1</sup> 1918
December.....	9.1	6.6	5.0	3.1	2.3	2.6	2.5	0.6	0.3	1.4	2.5
Yearly mean.....	7.8	7.7	4.7	3.0	<sup>2</sup> 3.2	2.1	3.3	1.1	.4	.6	.9

<sup>1</sup> Estimated figures.

<sup>2</sup> Affected by national coal dispute.

The number of members of unions making returns in November, 1918, was 1,140,000, excluding men on service. The total number of members of trade-unions is over 5,000,000 but this figure includes a large number of men serving in His Majesty's forces.

In addition to figures summarizing unemployment, statements are prepared each week by the Ministry of Labor showing the principal occupations and areas in which unemployment is highest. The following is the statement for the week ending February 28, 1919:

*Principal occupations on live register in Local Advisory Committee areas where unemployment is highest for week ending Feb. 28, 1919.*

[Percentages of total registrations.]

<i>Local Advisory Committee areas.</i>	
<i>London and South Eastern:</i>	
<i>Camden Town—</i>	
Men.....	Porters, etc., 27 per cent; engineering, 12 per cent; building, 8 per cent.
Women.....	General laborers, 37 per cent; domestic service, 20 per cent; clothing, 12 per cent.
<i>Tottenham—</i>	
Men.....	General laborers, 16 per cent; building, 16 per cent; engineering, 13 per cent.
Women.....	Clothing, 29 per cent; ammunition and explosives, 20 per cent; engineering, 12 per cent.
<i>Shepherds Bush—</i>	
Men.....	Porters, etc., 21 per cent; engineering, 14 per cent; general laborers, 14 per cent.
Women.....	General laborers, 64 per cent; domestic service, 17 per cent.
<i>Borough—</i>	
Men.....	Porters, etc., 21 per cent; general laborers, 19 per cent; engineering, 12 per cent.
Women.....	Clothing, 21 per cent; general laborers, 15 per cent; engineering, 9 per cent.
<i>Enfield—</i>	
Men.....	Engineering, 22 per cent; general laborers, 21 per cent; building, 10 per cent.
Women.....	Domestic service, 32 per cent; general laborers, 22 per cent; electric apparatus, etc., 11 per cent.
<i>South Midlands and Eastern:</i>	
<i>Luton—</i>	
Men.....	Engineering laborers, 31 per cent; engineering, 13 per cent; clothing trades, 11 per cent.
Women.....	General laborers, 35 per cent; clothing trades, 25 per cent; shop assistants, 10 per cent.
<i>Ipswich—</i>	
Men.....	Porters, etc., 14 per cent; engineering laborers, 14 per cent; general laborers, 10 per cent.
Women.....	General laborers, 39 per cent; domestic service, 20 per cent; shop assistants, 20 per cent.
<i>Lowestoft—</i>	
Men.....	General laborers, 21 per cent; merchant service, 9 per cent.
Women.....	General laborers, 44 per cent; engineering, 18 per cent.
<i>Letchworth—</i>	
Men.....	Engineering laborers, 14 per cent; builders' laborers, 9 per cent.
Women.....	Engineering, 72 per cent.
<i>St. Albans—</i>	
Men.....	General laborers, 16 per cent.
Women.....	General laborers, 60 per cent; domestic service, 19 per cent.
<i>Southwestern:</i>	
<i>Gloucester—</i>	
Men.....	General laborers, 23 per cent; porters, etc., 18 per cent; engineering, 15 per cent.
Women.....	General laborers, 49 per cent; domestic service, 21 per cent; shop assistants, 11 per cent.

*Principal occupations on live register in Local Advisory Committee areas where unemployment is highest for week ending Feb. 28, 1919—Continued.*

<i>Local Advisory Committee areas—Con.</i>	
<b>Southwestern—Concluded.</b>	
Cheltenham—	
Men.....	General laborers, 25 per cent; porters, etc., 17 per cent; domestic service, 10 per cent.
Women.....	Domestic service, 52 per cent; shop assistants, 18 per cent.
Southampton—	
Men.....	Porters, etc., 54 per cent; general laborers, 7 per cent.
Women.....	Domestic service, 22 per cent; ammunition and explosives, 12 per cent; shop assistants, 8 per cent.
Bristol—	
Men.....	Porters, etc., 31 per cent; engineering, 11 per cent; general laborers, 11 per cent.
Women.....	General laborers, 41 per cent; shop assistants, 13 per cent; commercial, 13 per cent.
<b>West Midlands:</b>	
Tipton—	
Men.....	Engineering laborers, 37 per cent; engineering, 30 per cent.
Women.....	Ammunition and explosives, 42 per cent; engineering, 39 per cent; engineering laborers, 9 per cent.
Dudley—	
Men.....	Engineering laborers, 64 per cent; engineering, 32 per cent.
Women.....	Engineering, 51 per cent; engineering laborers, 17 per cent; ammunition, 14 per cent.
Old Hill—	
Men.....	Engineering laborers, 36 per cent; engineering, 25 per cent; metals, 15 per cent.
Women.....	Ammunition, 50 per cent; engineering, 26 per cent; miscellaneous metals, 17 per cent.
Oldbury—	
Men.....	Engineering, 40 per cent; ammunition, 11 per cent.
Women.....	General laborers, 30 per cent; engineering, 28 per cent; domestic service, 10 per cent.
Birmingham—	
Men.....	Engineering, 51 per cent; engineering laborers, 11 per cent; porters, etc., 8 per cent.
Women.....	Engineering, 59 per cent; ammunition and explosives, 9 per cent; conveyance of men, etc., 6 per cent.
<b>Yorkshire and East Midlands:</b>	
Todmorden—	
Men.....	Cotton, 52 per cent; engineering, 6 per cent.
Women.....	Cotton, 84 per cent; clothing, 8 per cent.
Castleford—	
Men.....	Mines, 35 per cent; general laborers, 24 per cent.
Women.....	General laborers, 80 per cent; domestic service, 6 per cent.
Ilkeston—	
Men.....	Lace, 58 per cent; general laborers, 13 per cent.
Women.....	Lace, 56 per cent; domestic service, 12 per cent; hosiery, 8 per cent.
Leeds—	
Men.....	Engineering, 21 per cent; engineering laborers, 20 per cent; general laborers, 9 per cent.
Women.....	Clothing, 16 per cent; domestic service, 10 per cent; wool, 9 per cent.
Spenn Valley.....	No returns received.



*Principal occupations on live register in Local Advisory Committee areas where unemployment is highest for week ending Feb. 28, 1919—Continued.*

<i>Local Advisory Committee areas—Con.</i>	
Northwestern:	
Accrington <sup>1</sup> —	
Men.....	Cotton trades, 17 per cent; general laborers, 13 per cent; engineering laborers, 12 per cent.
Women.....	Cotton, 81 per cent; textile printing, etc., 7 per cent.
Burnley <sup>1</sup> —	
Men.....	Cotton, 56 per cent; general laborers, 10 per cent.
Women.....	Cotton, 92 per cent.
Blackburn—	
Men.....	Figures not available.
Women.....	Do.
Bury <sup>1</sup> —	
Men.....	Textile printing, 39 per cent; cotton, 16 per cent; general laborers, 10 per cent.
Women.....	Cotton, 64 per cent; textile printing, 11 per cent.
Hyde <sup>1</sup> —	
Men.....	Textile printing, 15 per cent; engineering laborers, 12 per cent.
Women.....	Cotton, 57 per cent; textile printing, etc., 11 per cent.
Northern:	
Jarrow—	
Men.....	Shipbuilding laborers, 36 per cent; shipbuilders, 28 per cent; mines and quarries, 9 per cent.
Women.....	General laborers, 35 per cent; ammunition and explosives, 14 per cent; miscellaneous metals, 8 per cent.
Gateshead—	
Men.....	Engineering, 31 per cent; general laborers, 25 per cent; engineering laborers, 18 per cent.
Women.....	General laborers, 24 per cent; domestic service, 23 per cent; shop assistants, 14 per cent.
Newcastle—	
Men.....	Engineering, 19 per cent; general laborers, 15 per cent; engineering laborers, 8 per cent.
Women.....	Domestic service, 20 per cent; shop assistants, 10 per cent; commercial occupations, 7 per cent.
Darlington—	
Men.....	Engineering laborers, 39 per cent; engineering, 24 per cent; building, 6 per cent.
Women.....	Domestic service, 39 per cent; shop assistants, 27 per cent; general laborers, 7 per cent.
Stockton—	
Men.....	Engineering, 25 per cent; engineering laborers, 17 per cent; shipbuilding, 17 per cent.
Women.....	Domestic service, 19 per cent; building, 18 per cent; general laborers, 16 per cent.
Scotland:	
Clydebank—	
Men.....	Engineering, 43 per cent; shipbuilding, 38 per cent.
Women.....	General laborers, 70 per cent; engineering, 12 per cent.
Glasgow—	
Men.....	Engineering, 27 per cent; engineering laborers, 18 per cent; general laborers, 9 per cent.
Women.....	General laborers, 42 per cent; shop assistants, 14 per cent; domestic service, 13 per cent.

<sup>1</sup> Figures are for Feb. 21.

*Principal occupations on live register in Local Advisory Committee areas where unemployment is highest for week ending Feb. 28, 1919—Concluded.*

<i>Local Advisory Committee areas—Con.</i>	
Scotland—Concluded.	
Kilmarnock—	
Men.....	Engineering, 16 per cent; mines, 15 per cent; engineering laborers, 14 per cent.
Women.....	Hosiery, 22 per cent; domestic service, 15 per cent; general laborers, 15 per cent.
Paisley—	
Men.....	Engineering, 29 per cent; engineering laborers, 26 per cent; general laborers, 8 per cent.
Women.....	General laborers, 20 per cent; textile smallware, 16 per cent; shop assistants, 10 per cent.
Arbroath—	
Men.....	Linen and jute, 22 per cent; engineering, 18 per cent; general laborers, 10 per cent.
Women.....	Linen and jute, 67 per cent; boots and shoes, 14 per cent.
Wales:	
Flint—	
Men.....	Metals, 72 per cent; general laborers, 10 per cent; building laborers, 9 per cent.
Women.....	Ammunition, 39 per cent; domestic service, 22 per cent; ammunition laborers, 16 per cent.
Swansea—	
Men.....	Porters, etc., 37 per cent; metals, 8 per cent.
Women.....	Ammunition laborers, 39 per cent; general laborers, 28 per cent; shop assistants, 13 per cent.
Newport—	
Men.....	General laborers, 15 per cent; porters, etc., 14 per cent; metals, 10 per cent.
Women.....	Engineering, 25 per cent; engineering laborers, 17 per cent; domestic service, 15 per cent.
Cardiff—	
Men.....	Porters, etc., 16 per cent; shipbuilding laborers, 18 per cent; general laborers, 11 per cent.
Women.....	General laborers, 49 per cent; commercial, 17 per cent; domestic service, 12 per cent.

## RECONSTRUCTION.

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### REPORT OF GOVERNMENT COMMISSION OF EMPLOYERS TO STUDY LABOR CONDITIONS IN EUROPE.

As noted in a previous issue of the REVIEW,<sup>1</sup> a commission of six employers appointed by the Secretary of Labor left the United States late in January, 1919, for the purpose of studying, in Great Britain, France, and other European countries, all phases of labor conditions (including the problem of unemployment) and governmental policies relating thereto. The commission's report,<sup>2</sup> just issued, deals specifically with conditions found in Great Britain.

In the course of its work the commission held conferences with members of both houses of Parliament, the Federation of British Industries, the chairman of the Engineering and National Employers' Federations, and prominent students of industrial problems; a great many large employers, officials of labor organizations, and groups of workingmen of all degrees of radical and conservative thought; the admiral commander in chief of the Rosyth Government Dockyard; and chiefs of the municipal tramways, and gas and electrical works of Manchester and Glasgow.

The commission reports that under the seething unrest, as expressed in speeches and in newspapers, they found a remarkable harmony of purpose among Government officials, conservative employees, and practically all employers.

Following are the findings of the commission:

1. Employers in Great Britain generally recognize the desirability of bargaining collectively with labor.

2. Employers nearly all agree that collective bargaining should always be undertaken between associations of employers and the regularly established well-organized trade-unions.

While many manufacturers welcome organizations of workmen in their factories (shop or works committees), they want to limit the activities of such bodies to purely local grievances, and decidedly desire that the committee members come under the discipline of their unions.

3. Most employers freely recognize the right of labor to organize; they regard organization as greatly contributing to the stability of industry. Some large manufacturers declare that they wish to see every workman within the unions, so that they must all come under organization control. Others feel that 100 per cent organization might lead to dangerous types of universal strikes and lockouts. The more conservative

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<sup>1</sup> MONTHLY LABOR REVIEW, March, 1919, p. 53.

<sup>2</sup> U. S. Department of Labor. Employers' Industrial Commission. Report on British Labor Problems. Washington, 1919. 31 pp.

employers appear to make no effort to help along organizations of labor, merely dealing with such organizations when they appear on the scene.

4. Employees in Great Britain are divided in sentiment shading from those who want to maintain the trade-unions along the regularly established so-called "constitutional" lines to ultraradical socialists.

5. Employees are nearly a unit, however, in expressing opposition to the use of force. The most radical who desire "now" a complete overturning of the present social structure usually admit on close questioning that "now" may mean many years. They want to "start" now. Practically none appear to approve of a sudden change, as in Russia.

6. Employees of the ultraradical type look askance at collective bargaining and organizations of labor and capital. They freely express the view that they do not wish harmony between employees and employers, since harmony would help to continue the present system of society.

7. Employees of the more conservative type (and to your commissioners they appear to represent the vast majority of British workmen) are largely in accord with employers in the desire (1) to head off labor unrest at this period; (2) to strengthen the unions by holding members under control; (3) to increase production for the sake of the nation, workmen included—with no restriction on output except as it affects the health of the worker; (4) to leave control of business policies in the hands of those managing the business.

8. Government officials appear to be uniformly of the opinion that the Government should function in labor unrest only as an absolutely last unavoidable resort. On the other hand, they maintain the right of the Government to step in when necessary in order to protect public interests against minorities which try to force their terms upon the people.

9. In general, the Government and most employers and conservative employees appear to be agreed:

That the spirit of cooperation between labor and capital is highly desirable.

That the spirit of conciliation is important for the benefit of the employer in stabilizing his business and for the benefit of the employee in preserving his regularly organized unions.

That in collective bargaining the right-minded employer will not attempt to return to the prewar industrial era, and that the right-minded employee will not attempt to crowd his demands to the point at which the stimulus for private business enterprise would disappear.

The spirit of a genuinely better new (and not novel) era is thus being fostered by widely varied elements of Great Britain's industrial system.

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#### RECOMMENDATIONS OF THE MICHIGAN RECONSTRUCTION COMMITTEE.

Mention was made in the March, 1919, issue of the MONTHLY LABOR REVIEW (p. 56) of the appointment by the Governor of Michigan of a reconstruction committee of men and women to study unemployment and other problems arising in the transition period between war and peace and to make recommendations, as a result of these investigations, to a reconstruction commission which was to meet in Lansing in March. These recommendations are embodied in a report,<sup>1</sup> together with an explanation of the problems upon which they are based.

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<sup>1</sup>Michigan. Reconstruction committee. Report. Reconstruction in Michigan. Lansing, Mar. 11, 1919. 26 pp.



Before entering upon a discussion of the problems involved, the committee defines the term "reconstruction" as follows:

The term is not used by all speakers with the same meaning, and sometimes it is applied in a sense quite at variance with its proper significance. The term reconstruction, in its proper acceptance, applies to those changes and innovations that represent an actual transformation of previous ideals, principles, policies, or methods—in other words, radical and basic reforms that have become necessary in the light of experience during the last four years.

Reconstruction means much more than readjustment, and when a speaker refers to a problem of reconstruction as a mere matter of readjustment, it means that he is not yet in step with the march of events, and that his eyes are not yet open to the new light. For example, the liquidation of war contracts, the proper disposal of accumulated stores by the Government, or the restoration of civil rights temporarily abridged, are matters of readjustment. But such matters as Americanization, permanent community organization, and the recognition and establishment of the just rights of labor are problems of reconstruction. These are more than mere matters of readjustment; they go deeper, touching the very foundations of our polity. They are not temporary problems arising out of war conditions and destined to disappear when peace conditions are restored; they are permanent problems—problems that have been latent for years, but to which our eyes have only just been opened—problems that will continue, regardless of war or peace, to call more and more insistently for an answer.

The report suggests the wisdom of approaching the whole subject of reconstruction from the proper angle; that to deal with the issues of 1919 from the view point of 1913 means failure. The war brought on a world-wide revolution in ideals as well as in actual conditions, and "we must pull with the new current of forces now at work or we shall be swept along helplessly."

A summary of the committee's report is arranged for the convenience of the conference and enumerates various suggestions and recommendations and emphasizes those upon which the committee would urge definite action. This summary makes 37 definite recommendations upon the following subjects: Organization; soldiers and sailors; conservation and relief; employment and housing; industrial relations; Americanization; education; health and child welfare; agriculture; and publicity and morale.

Under employment and housing the committee recommends: That the existing war boards should act immediately and cooperate with the Government in measures to provide work for discharged soldiers and sailors; that the conference approve of the present Federal and local campaigns to encourage all forms of building; that the conference recommend a general survey of all industries by State authority, as outlined in the report of the subcommittee on employment and housing, to develop permanent policies and methods for reducing unemployment; and that State and local councils be recommended to acquaint the public with the provisions of

the State housing law and to encourage the establishment of housing standards for all house construction.

Referring to industrial relations, the committee suggests that the conference recommend to the legislature the immediate establishment by law of an industrial relations commission; and that conferences of employers and employees be encouraged by local war boards and other local organizations.

Among the recommendations concerning soldiers and sailors the following are of special interest: "That the State cooperate with the Department of the Interior in providing farms for returned soldiers and others desiring land; that the conference recommend construction of needed public works to furnish immediate employment; \* \* \* that county war boards try to make sure that disabled men take the vocational retraining provided by the Government; \* \* \* and that local war boards and councils assist the Government in detecting payment of insurance and allowances to those not entitled to receive them."

On the subject of Americanization the committee recommends: That the conference indorse the Smith-Bankhead bill for Americanization and the removal of illiteracy; that the conference recommend that the State, without waiting for Federal action, proceed at once with a program for the same purposes contemplated in the Smith-Bankhead bill, and cooperate with the work of the Department of the Interior in that line; and that the State and community councils promote a campaign of publicity as to the need of adult education and Americanization.

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#### NATIONAL INDUSTRIAL CONFERENCE, GREAT BRITAIN.

On February 27, 1919, a national industrial conference was convened in London by the Premier, Mr. Lloyd-George. Realizing that the continuance of disputes was a menace to the life of the nation, and feeling that it was of prime necessity to ascertain, if possible, the basic causes of the prevailing unrest, the Government invited representatives of employers and of workers to this conference to get their views on the general situation and to seek their advice and assistance in meeting it.

The conference, which consisted of 500 workpeople's and 300 employers' representatives, was presided over by the Minister of Labor, Sir Robert Horne. At the close of a frank and illuminating discussion of particular phases of present industrial discontent, during which Mr. Lloyd-George addressed the conference and made an appeal to all sections "to hold together," Mr. Arthur Henderson introduced a resolution to the effect that:

This conference, being of the opinion that any preventable dislocation of industry is always to be deplored, and in the present critical period of reconstruction might be disastrous to the interests of the nation, and thinking that every effort should be made to remove legitimate grievances and promote harmony and good will, resolves to appoint a joint committee, consisting of equal numbers of employers and workers, men and women, together with a chairman appointed by the Government, to consider and report to a further meeting of this conference on the causes of the present unrest and the steps necessary to safeguard and promote the best interests of employers, workpeople, and the State, and especially to consider—

1. Questions relating to hours, wages, and general conditions of employment.
2. Unemployment and its prevention.
3. The best methods of promoting cooperation between capital and labor.

The joint committee is empowered to appoint such subcommittees as may be considered necessary, consisting of equal numbers of employers and workers, the Government to be invited to nominate a representative for each.

In view of the urgency of the question the joint committee is empowered to arrange with the Government for the reassembling of the National Conference not later than April 5, for the purpose of considering the report of the joint committee.<sup>1</sup>

The resolution was adopted by a majority of the conference, although a small labor group vigorously opposed it on the ground that the conference was not representative of the whole of labor.

Representatives, numbering 30 for each side and including two women to look after the interests of women workers, were chosen in separate meetings of the delegates as members of the joint committee. The first meeting of the committee held March 4, 1919, was presided over by Sir Thomas Munro whom the Government had appointed independent chairman, Sir Allen Smith acting as chairman of the employers' representatives, and Mr. Arthur Henderson acting as chairman of the trade-union representatives.

After a discussion as to the best method of procedure it was decided that the work could be most thoroughly and expeditiously done by dividing the committee into three subcommittees with separate terms of reference. Sir Thomas Munro (chairman of the joint committee) was made chairman of the subcommittee dealing with trade negotiations, wage advances, and the establishment of a permanent industrial council; Prof. L. T. Hobhouse acted as chairman of the subcommittee on maximum hours and minimum wages per week; and Sir David Shackleton of the Ministry of Labor was made chairman of the subcommittee considering unemployment.

Several days before the meeting of the National Industrial Conference scheduled for April 4, the full report of the joint committee was circulated, giving the delegates to the conference an opportunity to consider it beforehand. The following summary quoted from the report gives the views of the committee on the questions considered by them:<sup>2</sup>

<sup>1</sup> National Industrial Conference, London. Minutes of proceedings . . . London, 1919. 58 pp.

<sup>2</sup> National Industrial Conference. Report of the provisional joint committee for presentation to further meeting of Industrial Conference . . . Apr. 4, 1919. London, 1919. pp. 12, 13.

## HOURS.

- (a) The establishment by legal enactment of the principle of a maximum normal working week of 48 hours, subject to—
- (b) Provision for varying the normal hours in proper cases, with adequate safeguards.
- (c) Hours agreements between employers and trade-unions to be capable of application to the trade concerned.
- (d) Systematic overtime to be discouraged, and unavoidable overtime to be paid for at special rates.

## WAGES.

- (a) The establishment by legal enactment of minimum time rates of wages to be of universal applicability.
- (b) A commission to report within three months as to what these minimum rates should be.
- (c) Extension of the establishment of trade boards for less organized trades.
- (d) Minimum time-rates agreements between employers and trade-unions to be capable of application to all employers engaged in the trade falling within the scope of the agreement.
- (e) The Wages (Temporary Regulation) Act, 1918, to continue for a further period of six months from May 21, 1919.
- (f) Trade conferences to be held to consider how war advances and bonuses should be dealt with, and, in particular, whether they should be added to the time rates or piecework prices or should be treated separately as advances given on account of the conditions due to the war.

RECOGNITION OF, AND NEGOTIATIONS BETWEEN, ORGANIZATIONS OF EMPLOYERS  
AND WORKPEOPLE.

- (a) The basis of negotiation between employers and workpeople should be full and frank acceptance of employers' organizations and trade-unions as the recognized organizations to speak and act on behalf of their members.
- (b) Members should accept the jurisdiction of their respective organizations.
- (c) Employers' organizations and trade-unions should enter into negotiations for the establishment of machinery or the revision of existing machinery for the avoidance of disputes, with provision for a representative method of negotiation in questions in which the same class of employers or workpeople are represented by more than one organization respectively<sup>1</sup>, and for the protection of employers' interests where members of trade-unions of workpeople are engaged in positions of trust or confidentiality, provided the right of such employees to join or remain members of any trade-union is not thereby affected.

## UNEMPLOYMENT.

(1) *Prevention of unemployment.*

- (a) Organized short time has considerable value in periods of depression. The joint representatives bodies in each trade afford convenient machinery for controlling and regulating short time.
- (b) Government orders should be regulated with a view to stabilizing employment.
- (c) Government housing schemes should be pressed forward without delay.
- (d) Demand for labor can be increased by State development of new industries.



(2) *Maintenance of unemployed workpeople.*

(e) Normal provision for maintenance during unemployment should be more adequate and of wider application, and should be extended to under-employment.

(f) Unemployed persons, and particularly young persons, should have free opportunities of continuing their education.

(g) The employment of married women and widows who have young children should be the subject of a special inquiry.

(h) The age at which a child should enter employment should be raised beyond the present limit.

(i) Sickness and infirmity benefits and old-age pensions require immediate investigation, with a view to more generous provision being made.

NATIONAL INDUSTRIAL COUNCIL.

(a) A permanent National Industrial Council should be established to consider and advise the Government on national industrial questions.

(b) It should consist of 400 members, 200 elected by employers' organizations and 200 by trade-unions.

(c) The Minister of Labor should be president of the council.

(d) There should be a standing committee of the council numbering 50 members, and consisting of 25 members elected by and from the employers' representatives and 25 by and from the trade-union representatives on the council.

The conference held its resumed meeting April 4, 1919, as planned. After a full joint discussion of the committee's report, the two sections of the conference went into separate session for a more specialized consideration of the recommendations. When they met again in joint session, Mr. Arthur Henderson introduced a resolution agreeing to submit the report for acceptance to their constituent organizations upon the Government's official announcement of its readiness to carry it into effect. The resolution was unanimously adopted.

Attached to the report but not a part of it was a memorandum submitted by the trade-union representatives on the joint committee and signed by Mr. Arthur Henderson who also signed the draft report. In the memorandum the fundamental causes of industrial unrest, as the trade-unionists see them, are outlined and remedies suggested, and the statement is made that unless some constructive policy is adopted which will place industry on a more democratic basis the diminution of industrial unrest will be only temporary.

This conference consisting as it did of representatives of the various Whitley councils, National Alliance of Employers and Employed, Federation of British Industries, Parliamentary Committee of the Trade-Union Congress, of employers' associations and trade-unionists was unique in that it was a pioneer effort of its kind—the first conference made up of the representatives of the greater part of industry. Several of the largest and most powerful trade-unions, however, were not represented on the joint committee. Delegates from the "Triple Alliance" (railway men, miners, and transport workers) abstained from voting and many of the Amalga-

mated Society of Engineers did likewise because they had received no instructions to agree to the plan of the joint committee. The railway men attended the meeting of the conference on April 4, 1919, but the miners and transport workers decided not to take part in the resumed conference.

The recommendations of the committee would mean much to the strongly organized trades in that they would secure the full recognition of trade-unions in all industries. But it is among the less organized trades that its recommendations would be especially effective. The provisions for a 48-hour week, the general extension of trade boards, special rates of pay for overtime, and the right of maintenance for unemployment extended to underemployment, would all mean a great gain to workers unable through lack of organization to protect their own interests.

It is generally expected that Parliament will accept the report and that immediate steps will be taken to organize the permanent National Industrial Council. If this is done and the Government, labor, and capital cooperate promptly in carrying out the rest of the committee's program it will be a step forward in industrial relations, the influence of which can not at present be estimated.

According to the report, it is the opinion of the committee that the permanent National Industrial Council should unify and direct the existing means of dealing with industrial unrest rather than displace them. It should be an elective body, the method of election to be "determined by each side for itself, subject to two conditions—first, that the members must be representative of organizations, not of individual employers or workpeople; and, second, that the organizations concerned adopt such a method of election or appointment that their nominees can be regarded as fully representative." The committee also believes that if the council is effectively to perform its functions as an advisory body to the Government it should receive Government recognition as the authoritative source of information and advice regarding questions affecting industry as a whole.

The constitution provides that the standing committee of the council shall take such action as is necessary to carry out the objects of the council; shall consider "questions referred to it by the council or the Government and shall report to the council its decisions." It shall meet at least once a month and shall be empowered to choose representatives of any trade not directly represented upon it for the consideration of any question affecting that trade.

Appendix II of the report contains a provisional scheme for trade-union representation on the National Industrial Council.

## INTERIM REPORT OF THE BRITISH COAL INDUSTRY COMMISSION.

In January, 1919, the Miners' Federation of Great Britain presented to the Government claims for a readjustment of their position, covering four points. They asked for a 30 per cent increase in wages, together with a retention of the war bonus which had been given in recognition of the rise in the cost of living; a reduction of the working day to six hours; certain specified provisions for demobilized miners; and the nationalization of the coal mines.

To this the Government replied by offering an increase in wages of one shilling a day to meet the increase in the cost of living since the last wage adjustment; this would maintain the real value of their wages, which was all the Government was prepared to do offhand. Furthermore, the claims for an increase in real value of wages, for shorter hours, and for the nationalization of the mines were so important in regard to their probable effect on the industrial position of the country and the daily life of the entire community, including the miners themselves, that they ought not to be granted without investigation. The Government therefore proposed to set up a committee of inquiry, for which the miners should nominate their own representatives, to inquire into the matters raised and the position of the coal trade generally. As to demobilized miners, "the considered view of the Government is that it is impossible to give to the miners on demobilization different terms from those which are applied to all the other workmen of the country." This reply was submitted to the miners' representatives February 10, 1919.

The miners found this reply unsatisfactory. They were not willing merely to maintain their position; they intended to improve it. They pointed out that they had had no increase in real wages since the outbreak of the war. While the war lasted they had refrained from any attempt to secure a real advance, but now that it was over they would not be satisfied with anything less than an improvement in their standard of living. They believed that the economies possible under unified control would make it easily practicable to give the advance they demanded without increasing the cost of coal to the consumer. But the increased wage was only one item in their program for a better standard of living; they wanted the shorter hours, and more than all they wanted a real share in the determination of working conditions and of management. They looked with open suspicion on the offer of a committee of inquiry, regarding it as a mere pretext for indefinite delay. Consequently, following the receipt of the Government's reply, a strike ballot was prepared and sent out, the question being whether the Government's offer should be accepted or whether the miners should strike on



March 15, 1919, to enforce their full demands. The Miners' Federation has about 750,000 members; the vote stood 611,998 in favor of striking and 104,997 against.

In the meantime, even while the vote was being taken, earnest efforts were being made to reach some ground of agreement which would prevent the strike. The Government felt strongly that no wise decision could be given on such far-reaching demands without an inquiry into the actual situation, but they were willing to give guarantees that the inquiry should not be used to delay matters unduly. A compromise was at last agreed upon by which the executives of the Miners' Federation were to recommend a postponement of the strike date to March 22, provided, first, that the commission to be appointed should render an interim report on hours and wages by March 20, and, second, that the miners should choose half the members of the commission. The bill authorizing such a commission was hastily passed and received the royal assent February 26. The terms of reference authorized inquiry into the position of, and conditions prevailing in, the coal industry. In particular the commission was to inquire into:

(a) The wages and hours of work in the various grades of colliery workers, and whether, and, if so, to what extent, and by what method, such wages should be increased and hours reduced, regard being had to a reasonable standard of living amongst the colliery workers, and to the effect of such changes on the economic life of the country.

(b) Any inequalities between different grades of colliery workers as regards wages, hours of work, and other conditions, and whether, and, if so, to what extent any of these inequalities are unjustifiable and capable of remedy.

(c) The cost of production and distribution in the coal industry, or any industry commonly carried on in connection therewith or as ancillary or incidental thereto, and the general organization of the coal field and the industry as a whole.

(d) Selling prices and profits in the coal industry, or any industry commonly carried on in connection therewith or as ancillary or incidental thereto.

(e) The social conditions under which colliery workers carry on their industry.

(f) Any scheme that may be submitted to or formulated by the commissioners for the future organization of the coal industry, whether on the present basis, or on the basis of joint control, nationalization, or any other basis.

(g) The effect of the present incidence of, and practice in regard to, mining royalties and way leaves upon the coal industry and the cost of coal, and whether any and what changes in these respects are desirable.

(h) The effect of proposals under the above heads upon the development of the coal industry and the economic life of the country.<sup>1</sup>

The commission was also given power to summon witnesses, to compel the production of figures and documents, and to do whatever was necessary to obtain full information as to the real situation of the coal industry.

<sup>1</sup>Great Britain. Laws, statutes, etc. Coal Industry Commission Act, 1919. London, 1919. pp. 1, 2.



The commission was appointed at the end of February, its personnel being as follows: Chairman: Mr. Justice Sankey; representatives of employers in general: Arthur Balfour, Sir Arthur Duckham, and Sir Thomas Royden; representatives of the mine owners: J. T. Forgie, R. W. Cooper and Evan Williams; representatives of labor, in general: Sir Leo Chiozza Money, Sidney Webb, and R. H. Tawney; representatives of the miners: Robert Smillie, Frank Hodges, and Herbert Smith.

The hearings held by the commission were fully reported in the daily press, and the evidence brought forward aroused much attention and apparently produced an impression favorable to the miners. On March 20 not one but three interim reports were handed in, signed respectively by the chairman and the three representatives of employers in general, the representatives of the mine owners, and the representatives of the miners and of labor in general.<sup>1</sup>

The mine owners recommended an increase in wages of 1s. 6d. (36.5 cents) per day and a reduction of the statutory day to seven hours below ground and eight hours for surface workers, to begin July 1, 1919, holding that this is all that the industry can endure "without seriously affecting our home industries, which are dependent upon our coal supply." This report is based solely upon the existing status, and does not contain any discussion of whether, under a different system of management, greater concessions may not be possible.

The representatives of the miners and of labor generally recommended granting the original demands of the miners, except as to the special treatment of demobilized miners, on which point they were willing to yield entirely. They pointed out that the six-hour day asked for means six hours "at the face," i. e., actual working time, not including the time spent in getting down the shaft and to their places in the mine, so that their six-hour day really means from seven to eight hours underground. A considerable portion of the report is devoted to a discussion of the necessity for nationalizing the mines as a means of making possible the improvement in living conditions asked by the miners. Emphasis is placed on the waste and extravagance of the present system of individual ownership, whereby the management of the 3,300 mines of England is vested in 1,500 separate commercial enterprises. The report states that unified management is a prerequisite to economical and efficient administration and that nationalization is the only practical means of

<sup>1</sup> Great Britain. Coal Industry Commission. Coal Industry Commission Act, 1919. Interim report by the Honorable Mr. Justice Sankey (chairman), Mr. Arthur Balfour, Sir Arthur Duckham, and Sir Thomas Royden, March 20, 1919. London, 1919. 14 pp. Cmd. 84. Report by Messrs. R. Smillie, Frank Hodges, and Herbert Smith, Sir Leo Chiozza Money, Messrs. R. H. Tawney and Sidney Webb. March 20, 1919, London, 1919. 20 pp. Cmd. 85. Interim report by Messrs. R. W. Cooper, J. T. Forgie, and Evan Williams. London, March 20, 1919. 8 pp. Cmd. 86.

securing unified management, as it is incredible that public sentiment would support the formation of a trust, privately owned, which should control the entire coal supply of the Kingdom. The commission, it is admitted, had not had time to come to any opinion upon plans and methods of nationalization, but it is urged that the principle be recognized.

The report signed by the chairman and the representatives of employers in general recommended a shortening of the statutory day underground to seven hours, beginning July 16, 1919, with a further reduction to six hours July 13, 1921, provided the economic condition of the industry should justify it. It recommended also an increase in wages of 2s. (48.7 cents) per day for adults and 1s. (24.3 cents) for workers under 16, which is roughly two-thirds of the increase asked for by the men. The report points out that this will mean the distribution of an additional sum of £30,000,000 (\$145,995,000) per annum as wages among the colliery workers, and that this advance can be made, it is believed, without raising the cost of coal to the consumer.

The methods by which the increase is to be met are gone into in some detail. The reduction of the day by one hour will, it is estimated, mean a falling off in production of 10 per cent for the six months of 1919 during which it is in effect, representing a money loss of £13,000,000 (\$63,264,500), which, added to the increase in wages, makes £43,000,000 (\$209,259,500) to be raised. In part this is to be met by limiting the coal owners' profits to 1s. 2d. (28.4 cents) per ton of coal raised. This will give the owners, on a basis of an output of 250,000,000 tons, a profit of about £15,000,000 (\$72,997,500), and the difference between this and the £54,000,000 (\$262,791,000) which they would have received on the basis of the present hours and wages is £39,000,000 (\$189,793,500). This leaves £4,000,000 (\$19,466,000) to be made up, and in addition to this another loss must be faced. It is regarded as certain that the present price of coal exported to neutrals can not be maintained, and the falling off from this source is estimated at about £9,000,000 (\$43,798,500), making a total deficit of £13,000,000 (\$63,264,500). This must be made up by various methods. The miners have pledged themselves to do their best to secure good production, and it is suggested that the owners can introduce improved methods of coal getting and more economical methods of management and distribution, which will materially reduce the cost.

Wages and hours were the only subjects on which a report had been promised by March 20, but the chairman's report goes further. The commission, it states, should continue the plan of making interim reports.

When this commission meets again it ought, in our opinion, to continue to make interim reports with suggestions as to the different ways in which economies and improvements in the coal industry can be effected, and power should be given under which these reports could be immediately acted upon. \* \* \*

It is suggested that the best method of proceeding would be to make these reports as rapidly as possible and at short intervals, so that at the end of a period, say, of six months, it would be seen after due trial whether these suggestions are worthy of being permanently adopted in the act of Parliament, which must eventually be sought to secure the reorganization of the industry.

As the last sentence indicates, the chairman and the three members signing his report look forward to some change in the manner of managing the mines, though they are not yet prepared to say what this shall be. They are emphatic, however, in their view that the testimony already heard makes it apparent that the present system is unsatisfactory.

Even upon the evidence already given, the present system of ownership and working in the coal industry stands condemned and some other system must be substituted for it, either nationalization or a method of unification by national purchase and/or by joint control. \* \* \*

No sufficient evidence has as yet been tendered, and no sufficient criticism has as yet been made, to show whether nationalization or a method of unification by national purchase and/or by joint control is best in the interests of the country and its export trade, the workers, and the owners.

We are not prepared to report now, one way or the other, upon evidence which is at present insufficient, and after a time which is wholly inadequate. \* \* \*

We are prepared, however, to report now that it is in the interests of the country that the colliery worker shall in the future have an effective voice in the direction of the mine. For a generation the colliery worker has been educated socially and technically. The result is a great national asset. Why not use it?

We are further prepared to report now that the economies which should be effected by improved methods would be in the interests of the country, and should result in the industry yielding even better terms for the colliery workers than those which we are at present able to recommend, and at the same time yielding a fair and just return to the capital employed.

We think that the result of the colliery workers having an effective voice in the direction of the mine, coupled with the better terms just referred to, will enable them to reach a higher standard of living, to which, in our view, they are entitled, and which many of them do not now enjoy.

We think nothing but good can come from public discussion between workers and owners, and also from private deliberations between them. There has been too much secrecy in the past.

The signers of this report rather apologize for including one further subject, which they had not expected to touch upon in the promised interim report, but which they feel is so urgent that public attention should be drawn to it at once:

Evidence has been placed before the commission as to the housing accommodation of the colliery workers in various districts. Although it is true that there is good housing accommodation in certain districts, there are houses in some districts which are a reproach to our civilization. No judicial language is sufficiently strong or sufficiently severe to apply to their condemnation.



It is a matter for careful consideration whether a penny per ton should not at once be collected on coal raised, and applied to improve the housing and amenities of each particular colliery district. A penny per ton on our present output means about £1,000,000 [\$4,866,500] per year.

Upon the receipt of these three reports the Government adopted that signed by the chairman and the representatives of employers in general as embodying in the main the terms it was willing to make with the miners. They added to it the proviso that the increase in wages should be retroactive to January 9, 1919, the date at which the miners' claims for an advance were first laid before the Government, and the promise that the commission would be continued and would bring in a report on nationalization by May 20. The executive of the Miners' Federation reported these terms back to the members of the federation, with a strong recommendation that they should be accepted. At the conference of the Miners' Federation, held April 16, it was announced that the ballot on the Government's terms stood as follows: For acceptance, 693,004; against acceptance, 76,992. In accordance with the agreement, therefore, the Coal Commission has resumed its sittings, and is considering the question of nationalization.

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#### WHITLEY COUNCIL PLAN APPLIED TO BRITISH GOVERNMENT DEPARTMENTS.<sup>1</sup>

A draft scheme has recently been approved by the British War Cabinet, providing for the application of the Whitley industrial council plan to all Government departments having industrial establishments, such as the War Office, Admiralty, Office of Works, Ministry of Labor, etc. The proposed scheme has for its basis the setting up of two types of councils:

(1) A departmental joint council in each department having industrial establishments, composed of responsible officials appointed by the department, a representative of the Ministry of Labor, and representatives of the trade-unions having members employed in the various establishments belonging to the department.

It is not possible to formulate a definite list of matters with which these departmental councils will deal. This will be settled by joint action, and by the experience of the councils. Among the subjects coming within their scope, however, will usually be those involving the common interests of all the employees of the department, such as the consideration of the general principles laid down in the department's establishments, for the treatment of disciplinary questions, general organization and management, accommodation and working conditions, welfare, education and technique, etc. In addition an important work of these councils or of the trade joint council will be the consideration and provision of machinery for the ventilation and avoidance of grievances.

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<sup>1</sup> Data taken from British Labor Gazette (London) for March, 1919 (pp 81, 82).



(2) A trade joint council, composed of the representatives of the departments employing the particular class of labor, and representatives of the unions in the trades concerned, to deal with wages and other matters usually settled on a trade basis. It is proposed that the Treasury and the Ministry of Labor shall be represented on these trade councils.

The draft scheme provides for local machinery by way of one or more of the following types of committee: (a) Works or yard committee; (b) department committee (covering a department, including several shops, of a works or yard); (c) trade committee (covering a trade or group of trades normally acting together on trade matters); (d) shop committee.

It is suggested that one of the early duties of the department and trade joint councils will be to arrange for the setting up of these bodies. The procedure of these committees is thus described in the British Labor Gazette for March, from which this account is drawn:

#### PROCEDURE.

Following the lines which have been indicated above, a question which arises in a shop would, according as it was of (a) a general, or (b) a trade character, be dealt with as follows:

(a) *A general question.*—For example, a question of welfare, a question of discipline, etc. If not capable of settlement between the workman or workmen concerned (with the assistance of the secretary of the shop committee or other shop steward) and the foreman, the question would be discussed by the shop committee in meeting with the representatives of the management or by the secretary of the shop committee and the shop superintendent or other official. If it could not be thus settled the question would be referred to the works committee for discussion, and if possible, settlement with the representatives of the management, or possibly the secretary of the works committee himself might be able to settle the matter with the management. If a solution could not be arrived at on the works committee, the question would be referred to the departmental council.

In large works it may be found necessary to establish an intermediate committee between the shop and works committees, *i. e.*, a departmental committee, on which the procedure will be similar, and where settlement of certain questions may be achieved.

(b) *A trade question.*—For example, a question of wages, etc. If not capable of settlement between the workman or workmen concerned (with one or more of their trade representatives in the shop) and the foreman, the question would be referred to the trade committee or its secretary for negotiation with the works management. If the question could not be so settled the district representative (or representatives) of the union (or unions) would take part in or wholly take over the negotiations; if a settlement could not then be agreed upon the matter would be referred to the trade joint council.

It is important to recognize that, in dealing with trade questions, many of the most important trade-unions have district organizations as an integral part of their structure, and that it is the practice for the district officials to negotiate with the management of all works (including Government establishments) in their district, on matters

affecting the district rate of wages or other district arrangements. Provision has, therefore, been made above, that in the progress of a trade question from the shop upwards to the trade joint council the position of the district organization of the trade-union should, where it exists, be recognized.

At a meeting of men and women delegates from the departments concerned held on February 20, 1919, a resolution was passed adopting the scheme as presented by the Minister of Labor and recommending the creation of a standing arbitration council, or other suitable body, to which cases in which the Treasury or the employing departments are not prepared to approve and adopt a recommendation of a joint council could be referred. A provisional committee of 20 members from the engineering, shipbuilding, building, miscellaneous trades, and general labor was appointed to draft, in cooperation with the Treasury, Admiralty, War Office, Ministry of Munitions, Air Ministry, Office of Works, and Ministry of Labor, the constitutions of the various departmental and trade joint councils.

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#### SUGGESTIONS AS TO FUNCTIONS AND CONSTITUTION OF DISTRICT COUNCILS AND OF WORKS COMMITTEES.

The August, 1918, issue of the MONTHLY LABOR REVIEW (pp. 76-79) contained a reprint of a circular (H. Q. 7A), put out by the British Ministry of Labor, giving suggestions as to functions and constitution of a national joint industrial council. Following its plan to make the industrial council scheme as widely known as possible in order that employers and employees may thoroughly understand the results intended to be effected by such organizations, the Ministry of Labor prepared two additional circulars, one (H. Q. 7L) giving suggestions as to functions and constitution of district councils of national joint industrial councils, and the other (H. Q. 7K) giving suggestions as to functions and constitution of works committees in industries in which national joint industrial councils are established. These three circulars were, in January, 1919, issued as one pamphlet and put out by the Ministry of Labor as Industrial Reports, No. 4.

#### CONSTITUTION AND FUNCTIONS OF DISTRICT COUNCILS AND OF WORKS COMMITTEES.

The suggestions as to constitution and functions of district councils and of works committees are reproduced herewith:

##### DISTRICT COUNCILS.

The Whitley report states that:

The National Joint Industrial Council should not be regarded as complete in itself. What is needed is a triple organization—in the workshops, the districts, and nationally. Moreover, it is essential that the organization at each of these stages should proceed on

a common principle, and that the greatest measure of common action between them should be secured. With this end in view, we are of opinion that the following proposal should be laid before the National Joint Industrial Councils. That district councils representative of the trade-unions and of employers' associations in the industry should be created or developed out of the existing machinery for negotiation in the various trades.

It is clear that the Whitley report contemplates wherever possible that the joint industrial council should be established in the first instance, and that this national council should as soon as possible consider the question of the formation of district councils. In almost all the constitutions of joint industrial councils hitherto submitted to the Minister of Labor, the following appears among the more specific objects of the joint industrial council:

The consideration of the proposal for district councils as put forward in the Whitley report, having regard in each case to any such organization as may already be in existence.

At the request of several of the joint industrial councils already formed, the Ministry of Labor has drawn up the following memorandum on the constitution and functions of district councils, which is to be regarded as putting forward not hard-and-fast rules, but suggestions which may serve as a basis for discussion when the question of district councils is being considered by joint industrial councils. The underlying principle of the Whitley report is that the constitution and functions not only of the joint industrial council but also of the district councils should be left to be determined by the industries themselves in accordance with their special conditions and circumstances.

#### A.—FUNCTIONS OF DISTRICT COUNCILS.

The main functions of district councils would be as follows:

1. To consider any matters that may be referred to them by the National Joint Industrial Council, and to take executive action within their district in connection with decisions arrived at and matters deputed to them by it.
2. To make recommendations to the National Joint Industrial Council.
3. To consider any matters of interest to their district, including matters referred to them by works committees, and to take executive action with regard to matters that affect only their particular district, subject to the right of the national council to veto any such action if it be found to involve the interests of other districts.

The following may be regarded as among the more specific functions falling under this head (No. 3):

(a) The regular consideration of hours, wages, and working conditions, including the codification, unification, and amendment of working rules relating to holidays, juvenile labor, overtime, the shift system, etc. (N. B.—Special attention is called to the fact that no executive action should be taken upon these matters if such action is likely to involve the interests of other districts. In any cases of doubt, the district council should consult the national council before taking action.)

(b) The coordination of local workshop practice.

(c) General district matters relating to welfare work.

(d) The provision of facilities for the full consideration and utilization of inventions, and any improvement in machinery or method, and for the adequate safeguarding of the rights of the designers of such improvements, and to secure that such improvement or invention shall give to each party an equitable share of the benefits (financially or otherwise) arising therefrom.

(e) The improvement of health conditions obtaining in the industry and the provision of special treatment, where necessary, for workers in the industry.

(f) The supervision of entry into, and training for, the industry and cooperation with the educational authorities in arranging education in all its branches for the industry.

(g) The arrangement of lectures and the holding of conferences in the district on subjects of general interest to the industry.

4. Cooperation with the district councils for other industries to deal with problems of common interest.

5. Where no adequate machinery exists for the settlement of differences between different parties and sections of the industry, to consider any such differences as can not be settled within an individual factory or workshop, and to refer to the national council any such matters upon which the district council fails to come to a decision.

#### B.—CONSTITUTION OF DISTRICT COUNCILS.

1. *Areas of district councils.*—It would clearly be the work of the National Joint Industrial Council in consultation with the existing local associations to define the suitable areas to be covered by district councils. It is suggested that a district council should not cover a larger area than is compatible with decentralized action.

2. *Membership.*—The council shall consist of ——— members, appointed as to one-half by associations of employers and as to the other half by trade-unions. Members of the national council shall be ex officio members of the district council in their area.

##### *Associations of employers.*

##### *No. of representatives.*

(1)

(2)

(3)

&c.

Total

##### *Trade-unions.*

(1)

(2)

(3)

&c.

Total

(N. B.—When the question of membership is under consideration the national council will have to consider carefully the question of linking up district councils with works committees, if and when such exist. Provision might be made in the constitution for a certain proportion of members of the district council to be representatives elected from a conference of works committees if and when a sufficient number of works committees are set up within the area of the district council. The national council should also consider the advisability of linking up the district councils with the local advisory committees appointed by the Ministry of Labor to advise the local employment exchanges, especially on matters connected with demobilization.)

3. *Reappointment.*—The representatives of the said associations and trade-unions shall retire annually and shall be eligible for reappointment by their respective associations and unions. Casual vacancies shall be filled by the association concerned, which shall appoint a member to sit until the end of the current year.

4. *Committees.*—The district council may delegate special powers to any committee it appoints. The reports of all committees shall be submitted to the district council for confirmation, except where special powers have been delegated to the committee, and the district council shall have power to appoint on committees, or to allow committees to coopt such persons of special knowledge, not being members of the council, as may serve the special purposes of the district council.



5. *Officers.*—It might be advisable under this head to follow the method adopted in the constitution of the corresponding National Joint Industrial Council.

6. *Meetings of the district council.*—The ordinary meetings of the district council shall be held as often as necessary and not less than once a quarter. The annual meeting shall be held at least 14 days before the annual meeting of the National Joint Industrial Council. A special meeting of the council shall be called within —— days of the receipt of a requisition from one-third of the members of the council. The matters to be discussed at such meetings shall be stated upon the notice summoning the meeting.

7. *Voting.*—The voting, both in council and in the committees, shall be by show of hands or otherwise, as the district council may determine. No resolution shall be regarded as carried unless it has been approved by a majority of members present on each side of the district council.

8. *Quorum.*—The quorum shall be —— members on each side of the council.

9. *Finance.*—It might be advisable to adopt the method laid down in the constitution of the corresponding National Joint Industrial Council.

10. *Minutes.*—Copies of the minutes of all meetings of district councils shall be forwarded to the joint secretaries of the national council within one week of the meeting.

#### NOTE.

*The relation of district councils to the National Joint Industrial Council and to the Government.*

The functions and constitution of district councils shall be submitted to the national council for their approval, and copies of such constitutions and the membership of the various district councils should be sent by the National Joint Industrial Council to the Ministry of Labor.

Any communications addressed to Government departments by district councils must not be sent direct, but through the national industrial council.

#### WORKS COMMITTEES.

The differing circumstances of different industries make it impossible to devise any scheme suitable to every industry. Again, the type of works committee suitable will vary with the size of the firm and the form taken by organization among the employees. In preparing a scheme, therefore, the machinery outlined in the following suggestions may require to be adapted in greater or less degree if the general objects for which works committees are recommended are to be attained. These general objects are:

1. That the workpeople should be given a wider interest in, and greater responsibility for, the conditions under which their work is performed.

2. That the regulations contained in collective agreements drawn up by district and national authorities be enforced in the works.

3. That friction and misunderstanding be prevented so far as possible.

The attainment of these objects demands the establishment of recognized means for consultation between management and workpeople. At the same time anything that is done—whether or not it is embodied in the works rules drawn up by the works committee—must be consistent with the principles of the collective agreements accepted by the district and national authorities. For this reason steps should be taken to secure the closest possible connection between the works committee and the district and national councils.

## CONSTITUTION.

(1) The works joint committee shall be composed of (a) representatives of the workpeople and (b) representatives of the management.

In considering questions of membership it will be found more convenient to treat (a) and (b) separately.

(a) *Workers, side of joint committee.*

(i) The number of representatives will vary with the size and the complexity of the particular works. Some number from 5 to 12 is suggested as likely to suit most circumstances.

(ii) The members of the workers side should be trade-union representatives.

The national and district councils are based solely upon the representation of organizations. In the case of the works, in order to secure cohesion of policy as between the works committee and the district and national councils, it is advisable that the works committee should normally be based on a recognition of the workpeople's organizations.

But, in particular factories where the workmen are not strongly organized or where the functions of the works committee are such as to require the presence of workers who are not organized, it may be found necessary to depart from the principle laid down above. In these circumstances, however, the shop stewards, or other trade-union representatives in the works, should be consulted on all questions affecting district or national agreements. Any deviation from the general scheme should be adopted only after approval by the industrial council on a consideration of the merits of the case.

(iii) The representation should normally be on the basis of departments, due allowance being made for the various sections of workers engaged in any department.

In order that this may not sometimes necessitate a committee of unwieldy size, it is suggested that for large or complex works the workers' side of the joint committee should be appointed by and from a larger body of workers' representatives elected from the various departments.<sup>1</sup>

(iv) The representatives should be appointed for a definite term of office—6 or at most 12 months—and should be eligible for reelection.

(v) The election should be by ballot or by departmental (or sectional) meetings especially convened for the purpose.

(vi) The workers' side should appoint a chairman and a secretary.

(vii) On any representative leaving the employment of the firm or resigning his position as member a successor shall be appointed in the ordinary way by the department or section concerned, to hold office for the remainder of the term.

(b) *Management side of joint committee.*

(i) Certain members of the managerial staff should form a constant nucleus of the management side. (See (4) below.)

(ii) The number required for (i) will vary, but two, three, or four is suggested as a suitable number.

To have an equal number of members on the two sides would in most works be impracticable, and, in view of the suggested procedure, is unnecessary. (See, in particular, paragraph (11) under Procedure below.)

(iii) This number should be made up of such individuals as a managing director, the works manager, and, where there is such an official, the labor or welfare superintendent.

(2) The joint committee will be composed of the individuals in (a) (i) and (b) (i) coming together in joint meeting.

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<sup>1</sup> See also Notes (1) and (2), p. 121.

(3) The joint committee should appoint a chairman and a vice chairman (one from each side). Each side should appoint its own secretary.

(4) Either side shall have the right to add to its number representatives of the particular departments or sections of departments affected by a question under discussion and not directly represented on the committee. The addition shall be made only for the period during which the question affecting the particular departments or sections of departments is before the committee.

(5) The recognized district official of any trade-union or employers' association concerned may attend any meeting in an advisory capacity.

NOTE (1).—It may be found necessary to leave certain questions to be settled not by the whole works committee, but by a subcommittee of it on which the workers' representatives are drawn only from the particular department or section directly concerned, for example, a piecework question in one department of a works which is mainly on time work. The size of the works, also, is a factor which must be taken into account in considering the need for subcommittees. In some instances departmental subcommittees and in others functional subcommittees (*e. g.*, a "safety" committee or a welfare committee) may best suit the circumstances. Even where definite subcommittees are not arranged for, work of the same kind as these would perform may often be carried out by consultation between the representatives of the management and the secretary of the workers' side along with the representatives of a department.

NOTE (2).—In large works it will probably be found desirable to establish departmental committees, with a works committee representative of all the departments chosen from the departmental committees. In such cases, the functions of the departmental committees will be confined to matters affecting the department only, whilst the works committee will consider questions affecting more than one department or the whole works. The workers' side of a departmental committee should be so elected as to give representation to each of the various sections of workers engaged in the department.

#### PROCEDURE.

(1) Meetings of the joint committee shall be held at regular intervals of  $\left\{ \begin{smallmatrix} \text{two} \\ \text{four} \end{smallmatrix} \right\}$  weeks. The meetings shall be held during working hours.

(2) Special meetings of the joint committee shall be called at —— hours' notice on a request on behalf of one side by its secretary to the secretary of the other side.

(3) The agenda of business shall be submitted by the secretaries to each member of the committee at least —— hours before a meeting, except in the case of special meetings.

(4) No business other than that appearing on the agenda shall be transacted at any meeting unless both sides agree to its introduction.

(5) When an individual workman desires to bring any question before the committee he should report to his departmental or sectional representative, who in the case of grievances shall endeavor to reach a settlement. Failing a settlement, the representative shall inform the workers' secretary. The latter shall endeavor to arrange a settlement. Failing a settlement, the question shall come before the joint committee.

(6) In the course of his duties the secretary of the workers' side should have the right to enter any department in the works, and the representative of any department or section the right to enter the department in which the secretary is at work.

(7) Facilities should be provided for meetings of the workers' side of the committee in the works, normally after working hours or during meal hours.

(8) The workers' representatives should be paid at their ordinary rate for time spent at meetings of the joint committee.

- (9) Duplicate books of minutes should be kept, one by the secretary of each side.
- (10) Copies of the minutes of all meetings of the joint committee must be sent to the secretaries of the district council within seven days of the date of meeting.
- (11) Decisions shall be arrived at only by agreement between the two sides.
- (12) In the event of any matter arising which the committee can not agree upon, the officials of the trade-union or unions concerned shall negotiate with the firm or, if desired, with the officials of the employers' association. The question may thereafter be referred by either side to the district council.
- (13) The works committee shall not have any power to come to an agreement inconsistent with the powers or decisions of the district or national councils or with any agreement between a trade-union and the employers' association. Further, any agreement come to by a works committee may at any time be superseded by the district or national council or by agreement between a trade-union and the employers' association.

#### FUNCTIONS.

The list of functions outlined below is not meant to be exhaustive. Almost every industry has rules or customs which arise from the particular conditions under which the work of the industry is carried on (*e.g.*, the payment of "dirty money," provision of tools, allowances for working away from the works or from home, allowances on standard district piece prices for deficiencies in material or machinery, etc.). In a well-regulated industry many such matters will be subject to district or national agreements, and the powers of a works committee will be limited in the same manner as they will be in regard to the more general questions of district or national agreement (standard rates, piece prices, normal hours, overtime, etc.). No attempt has been made to include such questions as arise only in some industries, for which each national council concerned will have to decide upon a method of regulation, including the powers to be vested in works committees.

In regard to any function, the powers of a works committee will be controlled in accordance with paragraph (13) under procedure.

- (1) The issue and revision of works rules.
- (2) The distribution of working hours, breaks, time recording, etc.
- (3) The payment of wages (time, form of pay ticket, etc.), explanation of methods of payment, the adjustment of piece prices, subject to district or national agreements, records of piece prices, deductions, etc.
- (4) The settlement of grievances.
- (5) Holiday arrangements.
- (6) Questions of physical welfare (provision of meals, drinking water, lavatories, and washing accommodation, cloakrooms, ventilation, heating and sanitation, accidents, safety appliances, first aid, ambulance, etc.).
- (7) Questions of discipline and conduct as between management and workpeople (malingering, bullying, time keeping, publicity in regard to rules, supervision of notice boards, etc.).
- (8) Terms of engagement of workpeople.
- (9) The training of apprentices and young persons.
- (10) Technical library, lectures on the technical and social aspects of the industry.
- (11) Suggestions of improvements in method and organization of work, the testing of suggestions.
- (12) Investigation of circumstances tending to reduce efficiency or in any way to interfere with the satisfactory working of the factory.
- (13) Collections (for clubs, charities, etc.).
- (14) Entertainments and sports.
- (15) The provision of facilities for the workers' side of the joint committee (or of a departmental committee, if any) to conduct its own work.



## PRICES AND COST OF LIVING.

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### RETAIL PRICES OF FOOD IN THE UNITED STATES.

There was an increase of 2 per cent in the retail price of 22 articles of food combined in March, 1919, as compared with February, 1919, for the United States as a whole. The greatest increases were shown in onions, which were 40 per cent higher, and cabbage, which was 23 per cent higher than in the previous month. Butter shows an increase of 16 per cent; and oranges, 14 per cent. Coffee and tea each increased 3 per cent during the month. The five cuts of fresh beef which in February either remained stationary in price or declined slightly, show for March a slight advance in price. Eighteen articles declined in price during the month. Those articles having the largest per cent of decrease are as follows: Navy beans, 9 per cent; evaporated milk and potatoes, 7 per cent each; rice, 6 per cent; eggs and fresh milk, 5 per cent each.

A comparison of the year period shows an increase of 13 per cent in March, 1919, as compared with March, 1918. Onions show the greatest increase, or 50 per cent. Prunes show an increase of 27 per cent; rib roast, 25 per cent; sirloin steak, round steak, and coffee, 24 per cent, each. Other articles which show an increase of 20 per cent or over are: Butter, 20 per cent; plate beef, 21 per cent; and chuck roast, 22 per cent. Bread was 7 per cent cheaper and navy beans 31 per cent cheaper in March, 1919, than in March, 1918.

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**AVERAGE RETAIL PRICES AND PER CENT OF INCREASE OR DECREASE, MAR. 15, 1919,  
COMPARED WITH MAR. 15, 1918, AND FEB. 15, 1919.**

Article.	Unit.	Average retail price.			Per cent of increase (+) or decrease (-) Mar. 15, 1919, compared with Mar. 15, 1918, and Feb. 15, 1919.	
		Mar. 15, 1918.	Feb. 15, 1919.	Mar. 15, 1919.	Mar. 15, 1918.	Feb. 15, 1919.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	33.8	41.2	41.8	+24	+1
Round steak.....	do.....	31.8	38.8	39.4	+24	+2
Rib roast.....	do.....	26.8	32.6	33.4	+25	+2
Chuck roast.....	do.....	23.2	27.9	28.4	+22	+2
Plate beef.....	do.....	18.2	21.9	22.1	+21	+1
Pork chops.....	do.....	33.9	37.9	38.6	+14	+2
Bacon.....	do.....	48.8	55.3	54.9	+13	-1
Ham.....	do.....	44.1	51.8	51.4	+17	-1
Lamb.....	do.....		36.4	38.0		+4
Hens.....	do.....		39.6	41.1		+4
Salmon, canned.....	do.....	29.5	31.7	32.1	+9	+1
Milk, fresh.....	Quart.....	13.4	15.5	14.8	+10	-5
Milk, evaporated (unsweetened).....	(1).....		16.4	15.3		-7
Butter.....	Pound.....	55.2	57.2	66.5	+20	+16
Oleomargarine.....	do.....		39.2	39.0		-1
Nut margarine.....	do.....		35.9	35.5		-1
Cheese.....	do.....	35.1	40.9	40.5	+15	-1
Lard.....	do.....	33.2	32.1	33.4	+1	+4
Crisco.....	do.....		33.8	33.2		-2
Eggs, strictly fresh.....	Dozen.....	44.3	50.6	48.3	+9	-8
Bread.....	Pound <sup>1</sup> .....	10.5	9.8	9.8	-7	( <sup>2</sup> )
Flour, wheat.....	Pound.....	6.6	6.7	6.8	+3	+1
Corn meal.....	do.....	7.2	6.0	5.9	-18	-2
Corn flakes.....	8-oz. pkg.....		14.1	14.1		( <sup>2</sup> )
Cream of Wheat.....	28-oz. pkg.....		25.1	25.1		( <sup>2</sup> )
Rice.....	Pound.....	12.0	14.3	13.4	+12	-6
Beans, navy.....	do.....	18.1	13.7	12.5	-31	-9
Potatoes.....	do.....	2.5	3.1	2.9	+16	-7
Onions.....	do.....	4.0	4.3	6.0	+50	+40
Cabbage.....	do.....		4.3	5.3		+23
Beans, baked.....	No. 2 can.....		18.6	18.1		-3
Corn, canned.....	do.....		19.6	19.3		-2
Peas, canned.....	do.....		19.2	19.0		-1
Tomatoes, canned.....	do.....		17.0	16.4		-4
Sugar, granulated.....	Pound.....	9.2	10.7	10.6	+15	-1
Tea.....	do.....	61.5	68.4	70.4	+14	+3
Coffee.....	do.....	30.4	36.6	37.6	+24	+3
Prunes.....	do.....	16.5	20.3	20.9	+27	+3
Raisins.....	do.....	15.1	16.2	16.4	+9	+1
Bananas.....	Dozen.....		35.0	36.6		+5
Oranges.....	do.....		46.8	53.2		+14
All articles combined.....					+13	+2

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> No change in price.

For the six-year period March, 1913, to March, 1919, all articles of food combined show an increase of 80 per cent. Three articles increased over 100 per cent; flour, 106 per cent; bacon, 110 per cent; and lard, 114 per cent. All other articles show advances of 61 per cent or over.

## AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE, MAR. 15 OF EACH SPECIFIED YEAR COMPARED WITH MAR. 15, 1913.

Article.	Unit.	Average retail price Mar. 15—							Per cent of increase (+) or decrease (—) Mar. 15 of each specific year compared with Mar. 15, 1913.					
		1913	1914	1915	1916	1917	1918	1919	1914	1915	1916	1917	1918	1919
		<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>						
Sirloin steak.....	Pound..	24.6	25.4	24.6	26.2	29.5	33.8	41.8	+ 3	(1)	+ 7	+ 20	+ 37	+ 70
Round steak.....	do.....	21.3	23.0	22.1	23.3	26.7	31.8	39.4	+ 8	+ 4	+ 9	+ 25	+ 49	+ 85
Rib roast.....	do.....	19.3	19.9	19.5	20.6	23.3	26.8	33.4	+ 3	+ 1	+ 7	+ 21	+ 39	+ 73
Chuck roast.....	do.....	15.6	16.9	16.0	16.5	19.3	23.2	28.4	+ 8	+ 3	+ 6	+ 24	+ 49	+ 82
Plate beef.....	do.....	11.7	12.4	12.2	12.4	14.6	18.2	22.1	+ 6	+ 4	+ 6	+ 25	+ 56	+ 89
Pork chops.....	do.....	20.2	20.9	17.7	21.8	27.9	33.9	38.6	+ 3	-12	+ 8	+ 38	+ 68	+ 91
Bacon.....	do.....	26.1	26.7	26.4	27.6	33.3	48.8	54.9	+ 2	+ 1	+ 6	+ 28	+ 87	+110
Ham.....	do.....	26.2	26.5	25.6	30.3	33.8	44.1	51.4	+ 1	- 2	+16	+ 29	+ 68	+ 96
Lamb.....	do.....	19.1	18.9	19.5	22.0	26.2	31.7	38.0	- 1	+ 2	+15	+ 37	+ 66	+ 99
Liens.....	do.....	21.5	22.4	21.2	22.9	27.6	.....	41.1	+ 4	- 1	+ 7	+ 28	.....	+ 91
Salmon, canned.....	do.....	.....	.....	19.8	20.0	22.2	29.5	32.1	.....	.....	.....	.....	.....	.....
Milk, fresh.....	Quart..	8.9	9.0	8.8	8.8	10.0	13.4	14.8	+ 1	- 1	- 1	+ 12	+ 51	+ 66
Milk, evaporated (unsweetened).	Can.....	.....	.....	.....	.....	.....	.....	15.3	.....	.....	.....	.....	.....	.....
Butter.....	Pound..	41.4	35.1	35.9	40.2	46.1	55.2	66.5	-15	-13	- 3	+ 11	+ 33	+ 61
Oleomargarine.....	do.....	.....	.....	.....	.....	.....	.....	39.0	.....	.....	.....	.....	.....	.....
Nut margarine.....	do.....	.....	.....	.....	.....	.....	.....	35.5	.....	.....	.....	.....	.....	.....
Cheese.....	do.....	.....	.....	23.2	25.0	32.3	35.1	40.5	.....	.....	.....	.....	.....	.....
Lard.....	do.....	15.6	15.6	15.2	18.2	23.8	33.2	33.4	(1)	- 3	+17	+ 53	+113	+114
Crisco.....	do.....	.....	.....	.....	.....	.....	.....	33.2	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh.....	Dozen..	26.3	30.8	25.5	28.5	34.9	44.3	48.3	+17	- 3	+ 8	+ 33	+ 68	+ 84
Bread.....	Pound <sup>2</sup> ..	5.6	6.2	7.1	7.2	8.1	9.5	9.8	+11	+27	+29	+ 45	+ 70	+ 75
Flour, wheat.....	Pound..	3.3	3.3	4.4	3.9	5.7	6.6	6.8	(1)	+33	+18	+ 73	+100	+106
Corn meal.....	do.....	3.0	3.1	3.3	3.2	4.1	7.2	5.9	+ 3	+10	+ 7	+ 37	+140	+130
Corn flakes.....	(3).....	.....	.....	.....	.....	.....	.....	14.1	.....	.....	.....	.....	.....	.....
Cream of Wheat.....	(1).....	.....	.....	.....	.....	.....	.....	25.1	.....	.....	.....	.....	.....	.....
Rice.....	Pound..	.....	.....	9.1	9.1	9.1	12.0	13.4	.....	.....	.....	.....	.....	.....
Beans, navy.....	do.....	.....	.....	7.6	9.2	15.4	18.1	12.5	.....	.....	.....	.....	.....	.....
Potatoes.....	do.....	1.5	1.9	1.4	2.4	5.2	2.5	2.9	+27	- 7	+60	+247	+ 67	+ 93
Onions.....	do.....	.....	.....	3.3	4.5	12.5	4.0	6.0	.....	.....	.....	.....	.....	.....
Cabbage.....	do.....	.....	.....	.....	.....	.....	.....	5.3	.....	.....	.....	.....	.....	.....
Beans, baked.....	No. 2 can	.....	.....	.....	.....	.....	.....	18.1	.....	.....	.....	.....	.....	.....
Corn, canned.....	do.....	.....	.....	.....	.....	.....	.....	19.3	.....	.....	.....	.....	.....	.....
Peas, canned.....	do.....	.....	.....	.....	.....	.....	.....	19.0	.....	.....	.....	.....	.....	.....
Tomatoes, canned.....	do.....	.....	.....	.....	.....	.....	.....	16.4	.....	.....	.....	.....	.....	.....
Sugar, granulated.....	Pound..	5.4	5.1	6.6	7.4	8.7	9.2	10.6	- 6	+22	+37	+ 61	+ 70	+ 96
Tea.....	do.....	.....	.....	54.6	54.6	54.6	61.5	70.4	.....	.....	.....	.....	.....	.....
Coffee.....	do.....	.....	.....	29.9	29.9	29.9	30.4	37.6	.....	.....	.....	.....	.....	.....
Prunes.....	do.....	.....	.....	13.7	13.3	14.1	16.5	20.9	.....	.....	.....	.....	.....	.....
Raisins.....	do.....	.....	.....	12.5	12.6	14.1	15.1	16.4	.....	.....	.....	.....	.....	.....
Bananas.....	Dozen..	.....	.....	.....	.....	.....	.....	36.6	.....	.....	.....	.....	.....	.....
Oranges.....	do.....	.....	.....	.....	.....	.....	.....	53.2	.....	.....	.....	.....	.....	.....
All articles combined.....									+ 2	+ 1	+10	+ 36	+ 57	+ 80

<sup>1</sup> No change in price.  
<sup>2</sup> Baked weight.

<sup>3</sup> 8-ounce package.  
<sup>4</sup> 28-ounce package.

RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, JANUARY, 1913, TO MARCH, 1919.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	But- ter.	Milk.	Bread.	Flour.	Corn meal.	Pota- toes.	Sugar.	All articles com- bined.
<b>1913.</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
1914.....	102	106	103	104	104	105	102	102	99	102	102	94	100	112	104	105	108	100	190
1915.....	101	103	101	101	100	96	100	97	93	97	99	93	99	126	126	108	89	120	102
1916.....	108	110	107	108	106	108	106	109	111	111	109	103	102	130	135	113	155	146	101
1917.....	124	131	126	131	130	132	152	142	175	134	139	127	125	164	211	192	253	169	114
1918.....	153	165	155	166	170	186	195	178	211	177	165	151	156	172	203	227	188	176	168
<b>1913: Av. for year</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
January.....	94	92	95	93	91	89	94	93	97	95	108	107	100	100	100	99	91	106	98
February.....	94	93	95	93	92	90	95	94	98	97	91	108	100	100	100	98	90	100	97
March.....	97	96	98	98	96	97	97	97	99	100	77	108	100	100	100	98	88	99	97
April.....	101	99	101	101	101	103	99	99	100	104	73	106	100	100	100	98	87	98	98
May.....	101	100	101	101	100	100	100	99	106	104	76	94	99	100	101	98	91	97	97
June.....	102	101	102	102	100	99	101	102	100	103	81	92	99	100	101	98	104	97	98
July.....	104	102	103	103	115	103	104	104	101	102	87	91	99	100	101	98	110	100	100
August.....	104	104	102	103	101	101	105	106	102	101	96	92	99	100	100	100	109	104	101
September.....	103	103	101	103	102	108	104	104	102	101	109	98	100	100	100	102	110	104	102
October.....	101	104	101	103	102	107	103	102	101	100	121	100	101	100	100	99	103	101	103
November.....	100	102	100	102	102	107	101	100	101	100	144	101	102	100	99	104	107	99	105
December.....	99	101	100	101	102	97	99	99	100	98	138	104	102	100	99	104	106	98	104
<b>1914: Av. for year</b>	<b>102</b>	<b>106</b>	<b>103</b>	<b>104</b>	<b>104</b>	<b>105</b>	<b>102</b>	<b>102</b>	<b>99</b>	<b>102</b>	<b>102</b>	<b>94</b>	<b>100</b>	<b>112</b>	<b>104</b>	<b>105</b>	<b>108</b>	<b>108</b>	<b>102</b>
January.....	99	102	100	102	102	99	98	98	100	100	126	104	102	110	98	104	108	95	104
February.....	99	102	101	102	102	100	98	99	99	104	106	93	102	110	99	103	108	94	101
March.....	100	103	101	102	103	100	99	99	99	105	90	92	101	110	99	103	107	93	99
April.....	100	103	102	103	102	103	99	99	99	108	74	86	100	110	99	103	105	91	97
May.....	102	105	102	103	103	106	99	99	98	106	77	85	100	110	99	103	112	91	98
June.....	103	106	103	103	104	106	100	100	97	103	82	88	100	110	99	103	132	93	99
July.....	106	109	105	106	104	103	101	103	97	103	87	89	100	110	98	103	135	95	102
August.....	110	113	108	109	107	119	107	108	99	104	96	94	100	112	106	105	111	143	107
September.....	107	110	105	108	105	113	108	108	99	103	107	98	100	114	113	109	105	145	107
October.....	103	107	104	106	105	110	106	105	08	100	113	98	101	114	111	106	89	132	105
November.....	100	105	103	104	105	104	104	102	99	97	131	103	101	114	112	109	83	113	105
December.....	101	103	101	103	103	93	103	100	97	94	139	103	101	116	113	107	84	110	105
<b>1915: Av. for year</b>	<b>101</b>	<b>103</b>	<b>101</b>	<b>101</b>	<b>100</b>	<b>96</b>	<b>100</b>	<b>97</b>	<b>93</b>	<b>97</b>	<b>99</b>	<b>93</b>	<b>99</b>	<b>126</b>	<b>126</b>	<b>108</b>	<b>89</b>	<b>120</b>	<b>101</b>
January.....	101	102	101	101	102	88	101	98	97	95	129	101	101	120	124	109	85	110	103
February.....	98	100	100	99	101	85	99	96	97	97	98	98	100	126	138	110	84	118	101
March.....	97	99	99	98	100	85	98	95	96	99	74	94	99	126	136	110	82	120	98
April.....	99	100	100	98	100	94	98	94	96	100	75	91	99	126	137	109	86	122	99
May.....	101	101	101	101	101	99	98	95	96	101	76	91	99	128	139	109	89	124	100
June.....	103	105	103	103	101	98	99	97	95	98	78	90	98	126	140	109	99	126	100
July.....	105	107	104	103	101	100	102	98	93	97	81	90	95	126	145	108	95	127	100



August.....	104	107	103	100	98	97	88	99	126	124	108	82	128	100
September.....	104	106	103	100	97	97	101	99	126	124	108	79	128	100
October.....	103	104	101	99	99	97	117	100	124	113	108	94	118	101
November.....	101	102	99	98	100	95	133	100	124	113	107	97	119	103
December.....	99	101	99	100	100	95	135	101	124	114	107	106	124	105
<b>1916: Av. for year</b>	<b>108</b>	<b>110</b>	<b>108</b>	<b>106</b>	<b>109</b>	<b>111</b>	<b>109</b>	<b>103</b>	<b>130</b>	<b>135</b>	<b>113</b>	<b>155</b>	<b>146</b>	<b>114</b>
January.....	101	102	101	101	109	111	101	100	124	129	107	136	123	107
February.....	101	102	101	101	109	111	101	100	124	129	107	136	123	107
March.....	101	102	101	101	109	111	101	100	124	129	107	136	123	107
April.....	104	104	103	103	113	115	107	100	128	125	108	141	125	106
May.....	106	106	106	104	116	119	82	105	128	129	107	140	137	107
June.....	108	112	108	105	118	127	79	108	124	119	108	138	145	109
July.....	113	113	111	107	120	132	82	97	124	119	108	140	156	109
August.....	112	112	112	107	120	132	87	95	124	117	108	167	158	112
September.....	111	115	110	108	121	133	93	100	124	116	108	134	160	111
October.....	108	111	108	106	123	141	105	101	124	116	108	134	160	111
November.....	106	107	106	111	123	147	132	102	136	148	113	161	155	113
December.....	106	107	106	111	123	147	132	102	136	148	113	161	155	113
<b>1917: Av. for year</b>	<b>124</b>	<b>130</b>	<b>131</b>	<b>152</b>	<b>142</b>	<b>175</b>	<b>139</b>	<b>127</b>	<b>164</b>	<b>211</b>	<b>192</b>	<b>253</b>	<b>169</b>	<b>146</b>
January.....	109	111	109	113	110	136	138	118	140	171	132	225	146	128
February.....	113	117	114	125	114	138	147	122	142	171	136	290	148	133
March.....	116	119	118	123	125	151	101	121	144	174	137	297	160	133
April.....	127	130	131	132	136	167	112	133	150	206	154	339	173	145
May.....	125	133	134	145	144	176	116	122	170	206	178	352	183	152
June.....	129	135	137	148	155	177	119	123	170	246	182	305	170	152
July.....	129	137	137	151	159	174	131	124	176	220	195	246	166	146
August.....	130	138	136	164	160	176	134	128	182	229	219	206	181	153
September.....	131	133	137	185	164	188	142	132	176	223	272	219	179	153
October.....	130	138	136	178	159	198	160	133	176	214	232	178	177	157
November.....	124	133	132	165	179	207	168	144	176	208	235	183	174	155
December.....	126	134	134	161	161	211	184	142	166	205	235	178	172	157
<b>1918: Av. for year</b>	<b>153</b>	<b>165</b>	<b>166</b>	<b>186</b>	<b>178</b>	<b>211</b>	<b>165</b>	<b>151</b>	<b>172</b>	<b>203</b>	<b>227</b>	<b>188</b>	<b>176</b>	<b>168</b>
January.....	129	137	130	163	180	208	154	148	166	200	233	188	173	160
February.....	131	141	133	160	179	209	177	151	166	200	233	188	193	161
March.....	133	143	135	161	181	210	128	144	168	200	240	147	167	154
April.....	144	155	148	170	183	209	123	132	168	200	240	129	165	154
May.....	157	170	161	175	183	208	123	133	174	200	233	129	165	154
June.....	168	182	169	177	191	206	123	133	174	200	233	129	165	154
July.....	166	181	168	177	191	206	123	133	174	200	233	129	165	154
August.....	163	178	165	180	194	206	142	137	174	203	223	171	165	162
September.....	164	178	165	180	194	206	142	137	174	203	223	171	165	162
October.....	161	175	163	181	193	213	155	161	174	206	240	169	169	171
November.....	159	173	162	175	195	216	186	170	172	203	227	166	193	181
December.....	159	171	161	197	198	216	215	173	172	203	217	164	196	183
<b>1919:</b>														
January.....	162	175	165	198	217	211	218	184	172	200	207	188	196	185
February.....	162	174	165	193	205	203	147	149	172	203	200	182	195	172
March.....	162	177	169	203	211	211	140	174	172	206	197	171	193	175

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

[The prices shown in the tables following are computed from reports sent monthly to the bureau by month to

Article.	Unit.	Atlanta, Ga.						Baltimore, Md.					
		1919						1919					
		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.			Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.		
						Feb.	Mar.					Feb.	Mar.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	22.6	24.3	26.6	31.4	38.8	38.6	22.0	23.8	28.2	33.8	43.9	44.3
Round steak.....	Lb.	20.5	21.1	23.0	28.6	36.2	36.4	20.7	21.8	26.8	32.9	43.2	43.5
Rib roast.....	Lb.	18.4	18.6	20.7	23.9	30.8	31.2	18.0	18.0	21.8	26.8	34.6	35.3
Chuck roast.....	Lb.	13.0	15.4	15.9	21.2	26.1	25.6	15.3	15.3	19.0	23.7	30.6	30.5
Plate beef.....	Lb.	11.1	9.5	11.8	17.1	20.2	20.5	12.4	12.8	15.4	18.9	24.4	24.4
Pork chops.....	Lb.	21.5	22.1	28.0	34.0	35.4	36.9	19.3	18.4	25.8	34.3	39.2	38.4
Bacon, sliced.....	Lb.	31.0	29.8	34.7	50.8	60.0	59.6	22.0	23.6	28.8	44.6	49.9	49.0
Ham, sliced.....	Lb.	29.0	29.3	35.6	44.4	54.7	53.5	30.0	29.0	38.0	48.2	57.2	57.2
Lamb.....	Lb.	20.6	19.8	27.3	35.0	41.0	40.6	18.3	18.5	26.5	33.7	38.2	38.8
Hens.....	Lb.	19.3	21.7	24.8	.....	37.1	36.8	21.8	20.8	27.8	.....	43.9	44.9
Salmon, canned.....	Lb.	.....	.....	18.0	24.2	28.0	28.1	.....	.....	18.3	25.6	29.2	29.2
Milk, fresh.....	Qt.	10.0	10.0	13.2	17.5	21.7	21.7	8.8	8.7	9.2	13.0	16.0	15.0
Milk, evaporated (unsweetened).....	( <sup>1</sup> )	.....	.....	.....	.....	16.9	15.9	.....	.....	.....	.....	16.6	15.1
Butter.....	Lb.	42.4	38.1	47.5	58.4	60.0	68.9	42.1	37.4	48.6	58.3	61.3	68.0
Oleomargarine.....	Lb.	.....	.....	.....	.....	40.7	41.5	.....	.....	.....	.....	36.6	36.1
Nut margarine.....	Lb.	.....	.....	.....	.....	38.9	39.2	.....	.....	.....	.....	35.8	34.8
Cheese.....	Lb.	.....	.....	33.3	35.6	39.7	40.7	.....	.....	33.5	36.4	43.0	41.7
Lard.....	Lb.	14.8	15.3	23.3	33.9	33.8	34.8	14.0	14.4	23.8	32.5	30.5	31.4
Crisco.....	Lb.	.....	.....	.....	.....	33.3	32.6	.....	.....	.....	.....	32.3	32.2
Eggs, strictly fresh.....	Doz.	20.9	28.2	28.6	42.6	44.2	42.2	21.7	31.6	31.4	42.1	52.8	46.9
Bread.....	Lb. <sup>2</sup>	6.0	5.9	8.4	10.0	10.0	9.5	5.4	5.5	7.4	9.8	9.7	9.5
Flour.....	Lb.	3.6	3.5	5.7	7.1	7.0	7.0	3.2	3.2	5.8	6.8	6.7	6.8
Corn meal.....	Lb.	2.4	2.7	3.2	5.5	5.6	5.5	2.5	2.5	3.6	6.7	5.7	5.3
Corn flakes.....	( <sup>3</sup> )	.....	.....	.....	.....	14.1	14.0	.....	.....	.....	.....	13.5	13.4
Cream of Wheat.....	( <sup>4</sup> )	.....	.....	.....	.....	26.1	24.9	.....	.....	.....	.....	23.1	23.4
Rice.....	Lb.	.....	.....	7.9	12.2	13.3	13.1	.....	.....	9.3	11.7	13.4	13.1
Beans, navy.....	Lb.	.....	.....	15.4	18.7	16.3	15.0	.....	.....	15.0	18.4	14.5	13.4
Potatoes.....	Lb.	2.0	2.3	5.8	3.7	4.2	4.1	1.5	1.9	5.6	2.7	3.3	2.9
Onions.....	Lb.	.....	.....	12.3	5.2	5.2	7.2	.....	.....	13.9	4.1	4.2	5.7
Cabbage.....	Lb.	.....	.....	.....	.....	5.5	6.3	.....	.....	.....	.....	4.4	5.8
Beans, baked.....	( <sup>5</sup> )	.....	.....	.....	.....	19.3	18.6	.....	.....	.....	.....	17.0	15.9
Corn, canned.....	( <sup>5</sup> )	.....	.....	.....	.....	21.3	21.2	.....	.....	.....	.....	20.0	19.4
Peas, canned.....	( <sup>5</sup> )	.....	.....	.....	.....	20.9	20.2	.....	.....	.....	.....	18.2	17.7
Tomatoes, canned.....	( <sup>5</sup> )	.....	.....	.....	.....	14.6	14.0	.....	.....	.....	.....	16.0	15.5
Sugar, granulated.....	Lb.	5.6	5.0	9.0	9.9	11.2	11.1	5.1	4.6	8.6	8.7	10.3	10.2
Tea.....	Lb.	.....	.....	68.3	81.1	88.3	91.5	.....	.....	55.0	63.3	74.7	73.0
Coffee.....	Lb.	.....	.....	28.2	28.3	36.4	37.4	.....	.....	23.5	28.5	34.4	35.5
Prunes.....	Lb.	.....	.....	14.5	16.8	20.5	21.0	.....	.....	13.0	16.9	20.1	21.2
Raisins.....	Lb.	.....	.....	14.4	16.4	18.2	17.3	.....	.....	14.0	14.9	16.0	16.1
Bananas.....	Doz.	.....	.....	.....	.....	29.8	31.0	.....	.....	.....	.....	29.5	30.0
Oranges.....	Doz.	.....	.....	.....	.....	41.3	53.1	.....	.....	.....	.....	46.3	53.8

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.

FOR MAR. 15, 1913, 1914, 1917, 1918, 1919, AND FEBRUARY, 1919, FOR 19 CITIES.

retail dealers. As some dealers occasionally fail to report, the number of quotations varies from month.]

Birmingham, Ala.						Boston, Mass.						Buffalo, N. Y.					
Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919	
				Feb.	Mar.					Feb.	Mar.					Feb.	Mar.
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.9	28.0	29.2	34.9	40.5	41.6	34.6	32.2	39.6	42.3	50.8	59.2	22.0	21.6	20.5	32.4	39.3	39.2
21.3	23.0	25.4	32.2	37.2	39.3	33.0	34.3	37.6	42.8	55.5	56.5	19.0	19.4	23.8	30.1	36.5	36.7
19.3	21.0	22.8	26.7	32.4	33.4	23.4	24.4	27.4	29.8	39.3	39.9	17.3	16.8	20.0	25.7	31.6	32.2
16.1	16.5	19.6	22.3	27.9	29.8	17.7	16.8	21.8	24.9	30.7	32.4	15.3	15.4	18.0	23.4	27.5	28.0
10.5	12.0	14.2	17.8	21.5	22.4							11.5	11.8	15.0	17.9	21.5	21.8
20.0	22.9	27.5	32.5	34.3	36.2	22.2	22.7	27.9	34.6	38.3	38.6	19.3	19.8	30.3	34.2	37.7	40.9
31.3	34.0	36.7	53.0	58.9	60.7	25.4	25.0	31.7	46.3	50.6	51.0	21.0	20.2	29.0	44.8	48.6	46.5
30.0	32.0	37.5	44.5	53.0	53.0	28.8	31.3	37.3	45.8	55.3	56.2	25.0	25.3	35.0	45.3	50.2	51.4
21.3	21.5	28.3	35.0	37.5	41.1	21.8	21.2	27.9	33.4	40.2	41.6	17.3	16.3	23.3	30.1	32.4	34.6
18.7	19.5	23.0		35.8	36.6	24.2	24.7	30.0		41.1	43.0	21.7	21.8	28.0		40.5	41.2
		22.5	27.5	31.2	30.9			22.5	30.8	32.2	32.5			19.2	28.8	28.8	28.9
10.3	10.0	12.8	15.2	20.0	20.0	8.9	8.9	10.5	14.5	16.5	16.5	8.0	8.0	10.0	14.0	15.0	15.0
				17.1	16.6					17.1	16.0					16.7	15.5
45.0	39.6	50.0	58.8	59.9	70.8	41.4	35.7	45.7	55.8	56.7	65.1	40.6	34.1	45.0	54.0	55.5	65.5
				40.5	41.0					39.0	39.8					39.2	38.4
				39.3	40.1					35.6	35.2					33.6	33.4
		35.0	35.3	40.8	40.7			32.1	35.5	41.1	41.7			31.2	34.5	39.8	38.9
15.4	16.3	23.8	32.3	32.1	33.7	15.7	15.4	24.3	33.5	32.3	35.1	14.1	14.1	22.5	32.3	29.7	31.7
				33.3	32.9					33.3	33.2					31.0	30.8
25.5	28.8	31.0	39.6	43.0	45.6	32.8	34.7	45.0	54.6	62.1	60.2	24.7	32.7	38.0	46.8	51.8	50.8
5.0	5.6		10.0	10.8	10.8	5.9	5.9	7.8	8.9	9.1	9.2	5.6	5.2	8.6	9.3	9.4	9.5
3.8	3.7	6.1	6.7	7.3	7.4	3.7	3.7	5.3	7.0	6.7	7.2	2.9	2.9	5.3	6.4	6.2	6.4
2.1	2.6	3.5	5.6	5.0	4.9	3.5	3.5	4.8	7.9	6.6	6.7	2.5	2.6	4.0	7.8	5.4	5.3
				14.6	14.7					13.8	13.3					13.4	12.9
				25.3	25.3					24.3	24.7					24.4	24.3
		9.0	11.8	13.4	13.2			9.8	12.3	14.1	13.6			9.5	12.3	13.3	13.3
		17.5	18.5	15.8	14.9			15.3	18.6	13.5	11.8			15.4	18.4	12.2	11.5
1.9	2.3	6.1	3.0	3.9	3.9	1.6	1.9	5.2	2.5	2.9	2.7	1.4	1.7	5.5	2.4	2.6	2.4
		14.4	4.0	4.8	6.9			12.1	4.3	3.9	6.1			20.8	3.9	3.9	5.7
				5.2	6.1					4.3	6.2					3.2	3.6
				20.3	20.1					20.2	19.0					15.7	15.1
				20.0	20.1					21.2	21.9					20.1	20.1
				20.8	20.6					21.3	22.1					17.9	17.7
				15.7	14.3					20.2	20.4					17.3	15.5
5.2	5.1	9.1	9.1	11.0	11.0	5.3	4.9	8.3	9.3	10.6	10.4	5.3	4.9	8.8	9.8	10.6	10.4
		71.3	79.6	82.9	85.3			60.0	63.8	66.6	68.6			42.5	57.0	63.3	67.2
		31.0	32.3	39.1	41.0			33.4	34.1	41.1	42.5			33.3	30.5	35.6	36.4
		15.0	16.1	20.5	21.1			14.4	17.0	20.5	21.7			13.2	17.5	20.9	22.1
		14.9	15.7	16.9	17.3			14.0	14.9	15.9	15.8			12.2	14.2	14.6	14.7
				39.2	39.7					41.3	46.3					38.8	40.9
				44.5	51.4					45.8	57.1					52.4	57.4

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR

Article.	Unit.	Chicago, Ill.						Cleveland, Ohio.					
						1919						1919	
		Mar.	Mar.	Mar.	Mar.			Mar.	Mar.	Mar.	Mar.		
		1913.	1914.	1917.	1918.	Feb.	Mar.	1913.	1914.	1917.	1918.	Feb.	Mar.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	22.0	21.2	26.9	30.3	37.9	38.0	23.7	21.9	28.2	31.8	38.1	38.9
Round steak.....	Lb.	18.9	21.0	23.3	27.4	34.4	34.4	21.0	22.1	25.8	30.1	34.5	36.4
Rib roast.....	Lb.	19.4	19.4	21.6	25.5	32.0	32.4	19.2	19.6	22.7	25.9	29.8	30.7
Chuck roast.....	Lb.	15.3	16.0	18.2	22.0	27.8	28.0	16.2	17.0	20.2	23.9	27.9	28.3
Plate beef.....	Lb.	11.2	11.9	13.7	16.9	20.7	20.9	11.8	12.4	14.3	18.4	21.0	20.8
Pork chops.....	Lb.	17.9	18.4	25.8	30.9	33.3	35.5	19.8	20.3	31.2	33.6	37.9	41.2
Bacon, sliced.....	Lb.	29.8	30.9	34.8	49.2	57.1	57.1	25.6	27.8	34.9	48.3	55.8	55.3
Ham, sliced.....	Lb.	31.3	31.2	34.3	45.0	52.1	50.8	33.5	35.7	40.0	46.9	56.1	55.5
Lamb.....	Lb.	19.7	19.5	25.0	31.6	36.3	37.1	20.3	19.1	28.8	32.3	35.8	38.5
Hens.....	Lb.	19.9	20.3	26.8	.....	35.9	38.0	22.7	23.0	30.7	.....	40.6	43.4
Salmon, canned.....	Lb.	.....	.....	24.6	28.6	31.6	31.9	.....	.....	20.0	28.5	30.4	30.6
Milk, fresh.....	Qt.	8.0	8.0	9.0	11.9	14.0	13.0	8.8	8.0	10.0	13.0	14.0	13.0
Milk, evaporated (unsweetened).....	(1)	.....	.....	.....	.....	16.2	14.9	.....	.....	.....	.....	16.6	15.0
Butter.....	Lb.	40.4	32.9	44.5	50.6	53.5	63.9	43.4	36.0	49.5	53.9	57.3	68.2
Oleomargarine.....	Lb.	.....	.....	.....	.....	36.6	36.4	.....	.....	.....	.....	39.2	38.7
Nut margarine.....	Lb.	.....	.....	.....	.....	33.7	33.5	.....	.....	.....	.....	35.0	35.4
Cheese.....	Lb.	.....	.....	31.8	38.1	38.9	38.5	.....	.....	31.7	34.0	42.4	41.8
Lard.....	Lb.	14.6	15.2	22.6	32.1	30.4	32.2	16.1	16.3	25.2	32.8	32.4	31.0
Crisco.....	Lb.	.....	.....	.....	.....	32.8	32.7	.....	.....	.....	.....	32.7	32.6
Eggs, strictly fresh.....	Doz.	23.4	27.7	32.3	40.7	46.1	46.1	27.2	28.7	35.4	44.6	53.3	50.2
Bread.....	Lb. <sup>2</sup>	6.1	6.1	8.2	10.1	10.2	10.2	5.5	5.6	7.9	9.2	9.6	9.7
Flour.....	Lb.	2.7	2.9	5.3	6.4	6.2	6.4	3.2	3.2	5.8	6.7	6.7	6.8
Corn meal.....	Lb.	2.9	2.9	4.7	7.1	5.6	5.5	2.7	2.9	4.3	7.1	6.0	5.8
Cornflakes.....	(3)	.....	.....	.....	.....	12.6	12.7	.....	.....	.....	.....	14.2	14.3
Cream of Wheat.....	(4)	.....	.....	.....	.....	24.0	23.9	.....	.....	.....	.....	24.5	24.8
Rice.....	Lb.	.....	.....	8.7	12.4	13.3	13.3	.....	.....	9.2	12.1	13.8	13.5
Beans, navy.....	Lb.	.....	.....	15.7	18.4	12.8	11.9	.....	.....	16.0	17.7	11.7	11.3
Potatoes.....	Lb.	1.3	1.7	4.5	2.0	2.1	2.5	1.4	1.8	5.4	2.2	3.0	2.8
Onions.....	Lb.	.....	.....	11.1	3.6	3.5	5.7	.....	.....	13.0	3.4	3.8	5.7
Cabbage.....	Lb.	.....	.....	.....	.....	4.7	5.2	.....	.....	.....	.....	4.1	5.8
Beans, baked.....	(5)	.....	.....	.....	.....	17.5	16.8	.....	.....	.....	.....	17.0	16.5
Corn, canned.....	(5)	.....	.....	.....	.....	17.5	17.6	.....	.....	.....	.....	20.3	20.5
Peas, canned.....	(5)	.....	.....	.....	.....	16.9	17.0	.....	.....	.....	.....	19.5	19.4
Tomatoes, canned.....	(5)	.....	.....	.....	.....	16.1	16.0	.....	.....	.....	.....	17.4	16.9
Sugar, granulated.....	Lb.	4.9	5.0	8.2	8.7	10.2	10.0	5.5	5.0	9.2	8.9	10.7	10.8
Tea.....	Lb.	.....	.....	53.0	58.3	62.6	62.7	.....	.....	43.3	59.5	68.1	67.7
Coffee.....	Lb.	.....	.....	28.3	28.6	33.4	34.3	.....	.....	28.8	30.0	35.9	37.5
Prunes.....	Lb.	.....	.....	14.3	16.5	21.2	21.1	.....	.....	14.0	17.3	20.1	21.7
Raisins.....	Lb.	.....	.....	14.4	15.0	15.9	16.4	.....	.....	13.0	14.6	14.7	15.4
Bananas.....	Doz.	.....	.....	.....	.....	34.1	41.3	.....	.....	.....	.....	40.8	42.3
Oranges.....	Doz.	.....	.....	.....	.....	41.9	45.1	.....	.....	.....	.....	46.3	58.0

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.



## MONTHLY LABOR REVIEW.

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MAR. 15, 1913, 1914, 1917, 1918, 1919, AND FEBRUARY, 1919, FOR 19 CITIES—Continued.

Denver, Colo.						Detroit, Mich.						Los Angeles, Calif.					
Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919	
				Feb.	Mar.					Feb.	Mar.					Feb.	Mar.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
22.7	22.9	24.4	39.7	36.5	38.4	24.0	24.1	27.0	32.1	35.9	37.2	22.8	23.3	27.0	31.0	34.8	34.9
19.6	21.1	22.5	28.6	34.4	35.6	19.4	20.3	23.2	29.3	32.7	33.4	20.4	21.3	23.4	27.8	32.7	32.4
16.6	16.7	19.8	23.8	28.5	29.4	19.8	19.8	23.6	27.1	28.6	29.8	19.0	19.7	21.7	26.2	30.4	31.1
14.6	15.8	17.5	21.7	25.7	26.2	15.4	15.6	17.8	22.4	24.5	25.5	16.0	16.6	17.8	22.3	25.4	24.9
9.4	9.7	11.8	15.2	18.6	18.6	11.0	11.9	13.4	18.1	19.6	20.1	12.7	13.5	15.0	18.5	21.2	20.7
17.6	19.2	25.5	33.0	35.4	37.6	18.6	18.8	26.2	33.1	35.0	36.6	24.4	25.6	28.7	38.8	43.9	41.6
27.0	27.4	36.7	51.8	59.1	59.4	22.4	22.8	30.0	47.4	51.7	50.5	33.8	33.5	39.2	56.4	65.6	65.6
28.3	35.1	36.7	48.9	57.8	58.1	25.5	28.0	30.0	42.8	53.6	51.7	34.2	34.8	42.1	52.9	62.5	62.2
16.9	16.4	23.6	29.7	30.2	32.0	17.2	17.0	24.4	32.7	36.1	38.6	19.2	19.2	24.7	32.0	34.5	34.1
23.7	20.4	23.3	.....	34.6	36.2	21.6	22.3	27.6	.....	38.6	40.8	26.5	28.6	29.2	.....	45.7	45.6
.....	.....	20.0	28.0	32.0	31.5	.....	.....	20.0	29.0	32.1	32.9	.....	.....	26.3	32.9	39.3	40.6
8.4	8.4	8.3	11.5	12.3	13.0	8.9	8.9	11.0	14.0	15.0	15.0	10.0	10.0	9.0	14.0	14.0	14.0
.....	.....	.....	.....	17.0	15.4	.....	.....	.....	.....	16.1	15.2	.....	.....	.....	.....	15.3	13.4
39.0	33.6	42.8	49.7	50.8	64.9	40.6	33.7	45.4	52.6	54.0	65.9	43.5	29.7	39.0	53.8	59.1	64.1
.....	.....	.....	.....	38.5	39.2	.....	.....	.....	.....	39.6	38.7	.....	.....	.....	.....	41.7	40.6
.....	.....	.....	.....	35.5	35.2	.....	.....	.....	.....	34.8	34.6	.....	.....	.....	.....	36.5	36.1
.....	.....	.....	.....	32.5	35.7	.....	.....	30.0	35.0	38.9	39.0	.....	.....	29.5	33.7	43.6	41.5
16.3	16.3	24.3	34.4	33.6	34.7	16.2	16.0	23.0	33.5	32.7	33.4	17.9	18.0	23.4	33.7	33.1	32.2
.....	.....	.....	.....	32.1	32.5	.....	.....	.....	.....	32.9	32.7	.....	.....	.....	.....	33.8	33.3
26.1	26.0	35.0	41.5	47.7	46.5	25.2	31.4	35.0	44.9	50.3	49.1	26.0	25.8	30.4	43.0	47.1	44.1
5.3	5.4	8.4	10.0	11.8	11.3	5.6	5.6	8.2	9.5	9.5	9.5	6.2	6.1	6.8	8.9	8.9	8.9
2.6	2.6	4.7	5.6	5.9	5.9	3.1	3.0	5.6	6.8	6.5	6.5	3.6	3.6	5.6	6.3	7.2	7.2
2.4	2.6	3.2	6.0	5.6	5.4	2.7	2.9	4.5	7.4	6.3	6.2	3.1	3.5	4.8	8.3	6.8	6.6
.....	.....	.....	.....	14.6	14.7	.....	.....	.....	.....	14.0	13.9	.....	.....	.....	.....	13.9	13.8
.....	.....	.....	.....	25.3	25.4	.....	.....	.....	.....	25.0	24.9	.....	.....	.....	.....	24.8	24.3
.....	.....	9.2	12.0	14.3	14.2	.....	.....	8.6	12.2	13.3	13.2	.....	.....	8.4	11.9	13.6	13.7
.....	.....	13.8	17.3	13.9	13.7	.....	.....	15.5	17.9	12.2	11.3	.....	.....	14.2	16.8	13.3	10.8
1.0	1.5	4.7	2.0	2.4	2.3	1.2	1.6	5.1	2.1	2.4	2.3	1.0	1.8	4.8	1.9	3.0	3.0
.....	.....	14.4	3.4	4.2	5.8	.....	.....	11.9	4.4	4.2	5.9	.....	.....	11.1	2.6	3.8	6.1
.....	.....	.....	.....	3.8	3.8	.....	.....	.....	.....	4.1	5.1	.....	.....	.....	.....	2.8	3.2
.....	.....	.....	.....	18.8	19.2	.....	.....	.....	.....	17.7	16.6	.....	.....	.....	.....	20.1	19.3
.....	.....	.....	.....	18.6	18.9	.....	.....	.....	.....	19.0	18.8	.....	.....	.....	.....	18.7	19.2
.....	.....	.....	.....	19.1	19.4	.....	.....	.....	.....	17.7	17.7	.....	.....	.....	.....	18.9	19.4
.....	.....	.....	.....	15.3	15.3	.....	.....	.....	.....	16.8	16.6	.....	.....	.....	.....	16.8	16.2
5.4	4.8	8.2	9.2	11.4	11.2	5.0	5.0	9.0	8.8	10.5	10.5	5.2	4.9	8.1	8.8	10.6	10.5
.....	.....	48.8	57.6	67.2	67.3	.....	.....	47.5	54.7	62.6	63.0	.....	.....	55.0	60.5	69.6	70.5
.....	.....	28.8	29.5	38.0	39.6	.....	.....	27.5	30.1	36.7	37.2	.....	.....	29.9	30.3	36.6	38.1
.....	.....	13.8	16.8	20.0	20.4	.....	.....	12.9	17.0	19.8	20.3	.....	.....	12.3	15.6	20.6	22.5
.....	.....	13.1	14.7	16.6	17.4	.....	.....	12.8	14.1	16.1	16.0	.....	.....	12.4	13.8	16.0	16.7
.....	.....	.....	.....	41.0	43.2	.....	.....	.....	.....	28.0	30.7	.....	.....	.....	.....	38.6	37.0
.....	.....	.....	.....	45.2	50.9	.....	.....	.....	.....	49.1	52.3	.....	.....	.....	.....	36.0	35.2

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR

Article.	Unit.	Milwaukee, Wis.						New Orleans, La.					
						1919						1919	
		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.			Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.		
						Feb.	Mar.					Feb.	Mar.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	21.5	23.0	27.7	30.3	35.8	37.0	20.0	22.5	24.3	30.1	34.9	35.0
Round steak.....	Lb.	20.0	21.0	24.7	28.8	34.3	35.2	17.5	19.7	22.1	25.9	31.9	32.7
Rib roast.....	Lb.	17.8	18.5	21.8	24.9	29.8	31.0	19.6	20.4	21.6	25.3	31.4	32.0
Chuck roast.....	Lb.	15.5	16.3	19.5	22.9	27.5	27.9	13.0	15.0	17.0	19.9	25.2	25.9
Plate beef.....	Lb.	11.3	11.8	14.0	17.3	20.7	21.0	11.1	11.9	14.3	17.2	21.3	21.4
Pork chops.....	Lb.	18.8	18.2	27.2	31.1	32.6	36.5	21.1	23.5	29.0	35.0	40.6	41.0
Bacon, sliced.....	Lb.	27.3	27.3	32.5	48.2	54.1	55.2	29.3	30.6	38.5	50.0	57.4	57.7
Ham, sliced.....	Lb.	26.8	27.7	34.2	45.1	52.4	51.9	26.0	26.0	34.4	43.8	50.0	50.3
Lamb.....	Lb.	20.0	18.8	29.0	32.8	36.8	39.3	20.5	20.5	28.0	31.9	39.8	41.8
Hens.....	Lb.	21.8	21.2	27.3	.....	36.9	39.1	23.2	24.1	28.1	.....	39.9	40.8
Salmon, canned.....	Lb.	.....	.....	23.3	28.4	28.6	31.8	.....	.....	23.6	32.8	35.6	35.1
Milk, fresh.....	Qt.	7.0	7.0	8.0	11.0	13.0	12.0	10.0	9.7	11.5	14.3	16.2	16.0
Milk, evaporated (unsweetened). (1)		.....	.....	.....	.....	16.2	15.7	.....	.....	.....	.....	16.0	15.2
Butter.....	Lb.	39.6	32.4	47.5	51.4	54.8	65.3	41.9	34.8	48.9	54.9	56.4	66.4
Oleomargarine.....	Lb.	.....	.....	.....	.....	37.8	37.8	.....	.....	.....	.....	40.2	39.8
Nut margarine.....	Lb.	.....	.....	.....	.....	34.0	33.8	.....	.....	.....	.....	36.4	35.8
Cheese.....	Lb.	.....	.....	31.7	35.4	36.3	38.4	.....	.....	34.2	34.5	42.1	41.7
Lard.....	Lb.	15.3	16.0	24.4	32.8	31.6	33.5	14.6	14.9	23.7	33.6	31.5	32.6
Crisco.....	Lb.	.....	.....	.....	.....	32.7	32.7	.....	.....	.....	.....	33.4	32.7
Eggs, strictly fresh.....	Doz.	23.2	25.9	34.2	41.1	44.4	43.8	23.4	25.7	30.4	39.5	43.8	41.6
Bread.....	Lb. <sup>2</sup>	5.6	5.7	8.7	8.8	9.2	9.2	.....	4.8	6.9	8.9	9.2	9.2
Flour.....	Lb.	3.1	3.0	5.7	6.5	6.5	6.6	3.8	3.8	5.9	7.0	7.3	7.3
Corn meal.....	Lb.	3.3	3.3	5.0	8.2	6.0	6.2	2.6	2.8	3.9	6.0	5.2	5.4
Cornflakes.....	(3)	.....	.....	.....	.....	14.6	14.3	.....	.....	.....	.....	13.9	14.4
Cream of Wheat.....	(4)	.....	.....	.....	.....	24.9	24.9	.....	.....	.....	.....	24.9	24.8
Rice.....	Lb.	.....	.....	9.5	12.0	14.4	14.4	.....	.....	7.7	11.0	12.1	12.2
Beans, navy.....	Lb.	.....	.....	15.3	18.3	12.4	11.5	.....	.....	14.3	17.3	13.6	12.2
Potatoes.....	Lb.	1.2	1.6	5.1	1.9	2.7	2.6	1.9	2.2	6.0	3.4	3.9	3.8
Onions.....	Lb.	.....	.....	13.7	3.8	3.9	5.4	.....	.....	12.3	3.7	4.2	6.3
Cabbage.....	Lb.	.....	.....	.....	.....	4.4	5.8	.....	.....	.....	.....	2.7	4.2
Beans, baked.....	(5)	.....	.....	.....	.....	16.9	16.5	.....	.....	.....	.....	17.9	18.1
Corn, canned.....	(5)	.....	.....	.....	.....	17.6	18.2	.....	.....	.....	.....	18.5	18.1
Peas, canned.....	(5)	.....	.....	.....	.....	17.0	17.1	.....	.....	.....	.....	18.8	18.4
Tomatoes, canned.....	(5)	.....	.....	.....	.....	17.6	16.3	.....	.....	.....	.....	15.4	15.1
Sugar, granulated.....	Lb.	5.4	5.0	8.1	8.9	10.7	10.7	5.2	4.8	8.3	8.8	10.4	10.4
Tea.....	Lb.	.....	.....	55.7	60.6	66.2	67.3	.....	.....	63.0	63.7	62.9	67.1
Coffee.....	Lb.	.....	.....	28.3	27.0	33.6	35.6	.....	.....	28.4	26.1	33.4	33.8
Prunes.....	Lb.	.....	.....	14.8	15.9	19.9	21.8	.....	.....	14.2	15.5	19.3	20.0
Raisins.....	Lb.	.....	.....	14.5	14.6	15.8	16.0	.....	.....	14.3	15.4	16.9	16.8
Bananas.....	Doz.	.....	.....	.....	.....	35.0	35.9	.....	.....	.....	.....	16.7	16.3
Oranges.....	Doz.	.....	.....	.....	.....	44.2	50.7	.....	.....	.....	.....	44.3	50.4

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.

MAR. 15, 1913, 1914, 1917, 1918, 1919, AND FEBRUARY, 1919, FOR 19 CITIES—Continued.

New York, N. Y.						Philadelphia, Pa.						Pittsburgh, Pa.					
Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919	
				Feb.	Mar.					Feb.	Mar.					Feb.	Mar.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
25.4	26.0	29.6	34.6	44.9	44.9	28.6	30.0	34.5	39.8	47.4	51.6	26.0	27.7	31.5	37.3	46.1	47.6
23.8	25.4	29.1	35.7	46.9	46.8	23.5	25.7	30.9	37.4	47.3	48.0	22.0	23.7	28.5	34.7	42.7	43.7
21.7	21.8	25.4	29.6	40.9	40.7	21.4	21.9	25.6	30.3	37.6	39.1	21.8	21.7	24.7	29.6	36.0	37.5
15.8	16.1	19.2	23.3	31.7	32.1	16.5	17.8	21.5	26.0	32.1	32.6	16.2	16.8	20.0	25.7	31.2	32.5
14.5	14.8	17.2	22.1	28.5	28.7	11.4	11.9	14.5	19.0	21.9	22.1	11.6	12.8	14.8	18.8	22.9	23.4
21.3	21.8	28.5	34.9	39.9	39.8	20.3	21.5	29.4	35.6	57.9	41.0	21.3	21.8	30.8	34.7	38.8	39.0
23.6	25.1	31.1	45.7	50.3	49.9	23.8	25.7	32.6	46.6	55.3	54.4	28.1	29.5	33.7	50.2	57.0	56.0
28.5	30.0	37.3	46.9	56.0	55.8	29.7	29.6	39.5	48.9	56.6	55.4	28.8	30.1	37.3	47.8	57.5	58.0
17.3	16.6	23.7	30.1	32.3	33.9	18.6	19.5	26.6	32.6	37.0	40.3	22.5	20.3	30.3	36.4	40.0	41.9
21.1	21.6	27.4	.....	39.5	40.4	21.8	23.8	29.3	.....	42.5	43.6	26.4	27.0	35.0	.....	45.1	46.2
.....	.....	25.8	35.3	35.6	36.7	.....	.....	19.3	26.5	29.6	29.4	.....	.....	22.7	30.6	30.7	31.2
9.0	9.0	10.9	14.6	16.0	15.5	8.0	8.0	9.0	13.2	14.0	13.0	8.8	9.2	10.3	13.5	15.0	14.0
.....	.....	.....	.....	15.7	14.3	.....	.....	.....	.....	15.9	15.1	.....	.....	.....	.....	15.5	14.8
41.2	34.9	47.0	52.7	58.1	67.3	47.5	40.7	51.9	59.2	62.8	71.3	43.4	36.7	48.9	56.8	57.8	67.6
.....	.....	.....	.....	37.1	37.8	.....	.....	.....	.....	40.4	40.7	.....	.....	.....	.....	39.2	38.0
.....	.....	.....	.....	34.0	33.0	.....	.....	.....	.....	36.4	36.6	.....	.....	.....	.....	36.6	36.8
.....	.....	31.3	34.4	42.6	42.3	.....	.....	33.3	37.7	41.4	44.0	.....	.....	32.5	36.6	40.8	40.1
16.0	15.7	23.2	33.4	31.8	33.7	15.0	15.2	23.5	33.4	30.7	32.3	15.1	15.6	23.6	33.0	32.3	33.4
.....	.....	.....	.....	31.7	31.9	.....	.....	.....	.....	32.2	32.2	.....	.....	.....	.....	33.6	33.0
31.8	39.8	40.8	50.1	60.5	56.9	25.4	34.7	36.8	46.0	55.2	51.2	25.4	34.3	35.0	45.8	53.9	51.2
6.0	6.2	8.7	8.9	10.0	10.0	4.8	4.8	7.2	8.0	9.4	9.4	5.4	5.4	8.0	9.9	10.0	10.0
3.2	3.2	5.7	7.8	6.8	7.0	3.2	3.1	5.8	7.0	6.6	6.8	3.1	3.2	5.8	6.8	6.6	6.7
3.4	3.4	5.1	8.2	6.1	6.6	2.8	2.8	3.7	7.6	6.0	5.8	2.7	2.9	4.5	8.2	6.7	6.0
.....	.....	.....	.....	12.4	12.0	.....	.....	.....	.....	12.7	12.5	.....	.....	.....	.....	13.9	13.4
.....	.....	.....	.....	24.0	23.9	.....	.....	.....	.....	24.3	24.5	.....	.....	.....	.....	25.1	25.3
.....	.....	8.9	11.9	13.3	13.2	.....	.....	9.7	13.1	14.5	14.6	.....	.....	9.4	12.3	14.2	14.2
.....	.....	15.2	18.3	14.3	12.6	.....	.....	14.8	18.4	13.6	12.5	.....	.....	16.5	18.8	14.1	12.1
2.3	2.5	6.3	3.6	4.0	3.7	2.1	2.5	6.2	2.8	3.8	3.7	1.5	1.8	5.4	2.6	3.0	2.8
.....	.....	11.1	3.8	4.4	5.9	.....	.....	12.2	3.9	4.1	5.9	.....	.....	12.9	3.7	4.2	6.1
.....	.....	.....	.....	3.7	5.3	.....	.....	.....	.....	4.5	6.8	.....	.....	.....	.....	4.8	5.5
.....	.....	.....	.....	16.8	15.8	.....	.....	.....	.....	14.8	14.2	.....	.....	.....	.....	17.8	17.9
.....	.....	.....	.....	19.0	18.9	.....	.....	.....	.....	19.8	19.2	.....	.....	.....	.....	19.6	19.8
.....	.....	.....	.....	18.2	18.0	.....	.....	.....	.....	18.1	18.3	.....	.....	.....	.....	19.7	19.0
.....	.....	.....	.....	15.5	15.1	.....	.....	.....	.....	16.4	14.9	.....	.....	.....	.....	17.2	15.1
4.8	4.5	8.4	8.8	9.9	9.9	4.9	4.5	7.9	8.8	10.0	10.0	5.6	5.5	9.9	9.9	10.8	10.8
.....	.....	45.4	52.8	55.1	55.7	.....	.....	54.4	58.7	62.8	62.9	.....	.....	56.7	73.2	79.5	80.0
.....	.....	26.7	26.6	33.5	34.1	.....	.....	28.5	27.9	32.8	33.6	.....	.....	27.0	30.1	36.3	36.4
.....	.....	14.2	17.1	22.9	23.1	.....	.....	14.2	17.1	20.7	22.3	.....	.....	13.8	17.2	21.9	23.3
.....	.....	13.7	14.9	15.7	15.7	.....	.....	12.7	14.2	15.1	15.0	.....	.....	14.2	14.6	15.9	16.0
.....	.....	.....	.....	32.1	35.9	.....	.....	.....	.....	33.3	35.1	.....	.....	.....	.....	40.3	41.6
.....	.....	.....	.....	50.0	58.1	.....	.....	.....	.....	47.2	57.2	.....	.....	.....	.....	48.2	56.4

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR

Article.	Unit.	St. Louis, Mo.						San Francisco, Calif.					
						1919						1919	
		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.			Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.		
						Feb.	Mar.					Feb.	Mar.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	22.8	25.8	27.6	31.7	38.5	39.4	20.3	21.0	23.1	28.4	33.3	33.3
Round steak.....	Lb.	20.2	23.4	26.3	31.2	37.8	38.8	19.0	19.7	22.7	28.2	32.4	32.4
Rib roast.....	Lb.	18.4	20.0	22.1	26.9	30.9	32.3	20.7	22.1	23.7	26.7	31.2	30.9
Chuck roast.....	Lb.	15.4	15.5	17.9	22.2	25.6	25.9	14.6	15.5	16.3	20.6	24.0	23.9
Plate beef.....	Lb.	10.7	14.2	13.6	18.0	21.6	22.0	12.9	15.0	15.6	19.8	22.4	22.4
Pork chops.....	Lb.	18.0	18.8	25.7	30.0	34.2	36.1	24.0	25.0	30.8	35.6	43.8	43.3
Bacon, sliced.....	Lb.	23.8	25.0	32.2	48.8	53.2	53.3	32.1	33.7	37.5	53.5	60.0	59.5
Ham, sliced.....	Lb.	26.7	27.5	35.6	46.7	54.2	54.5	27.0	27.9	38.3	49.4	58.3	57.1
Lamb.....	Lb.	17.1	17.9	26.5	31.7	36.5	39.6	17.3	18.3	25.3	31.4	34.7	33.8
Hens.....	Lb.	18.6	19.6	25.1	.....	35.9	37.9	23.8	24.0	28.3	.....	48.6	49.3
Salmon, canned.....	Lb.	.....	.....	19.6	28.9	32.0	31.8	.....	.....	19.6	25.3	27.9	28.1
Milk, fresh.....	Qt.	8.0	8.0	9.5	12.0	14.0	14.0	10.0	10.0	10.0	12.1	14.0	14.0
Milk, evaporated (unsweetened). (1)	Lb.	.....	.....	.....	.....	16.5	14.7	.....	.....	.....	.....	16.0	13.9
Butter.....	Lb.	41.2	34.2	47.6	56.3	57.0	68.1	42.9	30.7	41.7	56.8	62.7	64.5
Oleothargarine.....	Ld.	.....	.....	.....	.....	37.0	37.0	.....	.....	.....	.....	36.8	37.4
Nut margarine.....	Lb.	.....	.....	.....	.....	35.2	34.8	.....	.....	.....	.....	36.9	36.0
Cheese.....	Lb.	.....	.....	31.4	36.8	38.0	38.9	.....	.....	28.8	32.6	37.4	40.5
Lard.....	Lb.	13.6	12.6	22.6	30.3	29.2	32.0	16.9	16.5	23.5	33.7	34.3	33.7
Crisco.....	Lb.	.....	.....	.....	.....	33.3	32.8	.....	.....	.....	.....	34.6	32.5
Eggs, strictly fresh.....	Doz.	22.0	25.6	29.8	39.8	44.9	41.5	23.5	24.6	32.5	43.3	44.4	44.6
Bread.....	Lb. <sup>2</sup>	5.5	5.6	8.3	9.8	10.0	10.0	5.7	5.9	7.1	10.0	10.0	10.0
Flour.....	Lb.	3.0	2.8	5.3	6.1	6.3	6.5	3.3	3.4	5.1	6.1	7.2	7.1
Cornmeal.....	Lb.	2.1	2.6	3.5	6.8	5.0	5.0	3.4	3.5	4.4	7.3	7.0	6.3
Corn flakes.....	(3)	.....	.....	.....	.....	13.9	13.9	.....	.....	.....	.....	14.0	14.0
Cream of Wheat.....	(4)	.....	.....	.....	.....	24.8	24.2	.....	.....	.....	.....	24.7	24.8
Rice.....	Lb.	.....	.....	8.6	11.3	13.4	13.3	.....	.....	8.8	12.0	13.9	13.6
Beans, navy.....	Lb.	.....	.....	14.9	18.0	11.8	11.8	.....	.....	14.7	15.9	12.5	10.6
Potatoes.....	Lb.	1.3	1.6	4.8	2.3	3.0	2.7	1.2	1.7	4.5	2.3	2.9	2.9
Onions.....	Lb.	.....	.....	11.4	2.9	4.3	6.8	.....	.....	9.2	2.6	3.1	4.9
Cabbage.....	Lb.	.....	.....	.....	.....	4.2	5.7	.....	.....	.....	.....	1.7	5.0
Beans, baked.....	(6)	.....	.....	.....	.....	16.0	16.1	.....	.....	.....	.....	20.4	20.0
Corn, canned.....	(7)	.....	.....	.....	.....	16.9	16.4	.....	.....	.....	.....	19.7	19.6
Peas, canned.....	(8)	.....	.....	.....	.....	17.5	16.9	.....	.....	.....	.....	18.6	17.9
Tomatoes, canned.....	(9)	.....	.....	.....	.....	15.7	14.0	.....	.....	.....	.....	15.6	15.8
Sugar, granulated.....	Lb.	5.1	4.9	8.3	8.6	10.8	10.7	5.3	5.1	7.9	8.8	10.6	10.5
Tea.....	Lb.	.....	.....	54.3	66.0	73.6	72.7	.....	.....	51.7	52.9	56.9	57.2
Coffee.....	Lb.	.....	.....	23.7	27.5	34.9	34.9	.....	.....	31.7	30.0	36.4	36.6
Prunes.....	Lb.	.....	.....	14.1	16.8	19.9	20.4	.....	.....	12.4	13.5	18.4	19.1
Raisins.....	Lb.	.....	.....	15.0	16.9	15.7	16.4	.....	.....	13.5	13.7	14.7	14.6
Bananas.....	Doz.	.....	.....	.....	.....	32.5	33.5	.....	.....	.....	.....	36.7	33.8
Oranges.....	Doz.	.....	.....	.....	.....	42.8	50.4	.....	.....	.....	.....	50.9	50.8

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.



MAR. 15, 1913, 1914, 1917, 1918, 1919, AND FEBRUARY, 1919, FOR 19 CITIES—*not* included.

Seattle, Wash.						Washington, D. C.					
Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919		Mar., 1913.	Mar., 1914.	Mar., 1917.	Mar., 1918.	1919	
				Feb.	Mar.					Feb.	Mar.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
21.8	24.0	25.0	30.5	36.9	38.0	26.4	27.1	29.1	39.2	50.0	49.9
20.0	21.2	23.0	29.0	35.6	36.3	23.1	23.3	27.9	36.9	47.5	47.4
18.2	19.1	22.2	25.5	31.3	32.0	21.0	21.0	24.0	30.8	40.9	40.2
15.0	15.1	17.2	21.7	26.8	27.1	16.6	17.0	20.3	26.6	33.9	34.2
11.2	12.8	13.5	18.1	21.8	22.4	11.7	12.8	15.8	19.6	23.3	23.5
23.4	24.0	28.8	38.8	45.2	45.7	21.9	20.8	28.3	38.7	44.4	44.5
30.0	31.4	37.6	53.3	60.8	60.2	25.4	21.6	30.8	48.5	52.6	52.0
30.0	30.0	36.0	46.5	56.1	55.4	28.6	28.6	35.0	48.1	58.1	57.7
18.2	19.1	26.2	32.8	36.6	37.8	21.4	19.9	28.2	36.8	42.5	44.8
24.0	25.0	27.5	.....	43.2	44.5	22.1	23.0	28.3	.....	45.3	45.6
8.6	8.8	21.8	28.9	31.2	32.2	9.0	9.0	19.7	30.0	34.4	34.7
44.0	35.0	10.0	12.6	15.7	13.7	.....	.....	10.0	14.0	17.0	17.0
.....	.....	.....	.....	15.3	13.9	.....	.....	.....	.....	16.9	16.1
.....	.....	.....	.....	58.4	68.4	44.1	35.9	49.0	59.2	60.2	71.1
.....	.....	.....	.....	42.0	42.5	.....	.....	.....	.....	37.4	37.9
.....	.....	.....	.....	39.6	38.4	.....	.....	.....	.....	35.8	35.3
.....	.....	28.1	30.8	42.2	40.8	.....	.....	32.6	36.3	43.7	41.8
17.3	16.2	24.0	33.4	34.2	33.4	14.6	14.3	23.0	23.5	31.8	33.0
.....	.....	.....	.....	35.7	35.7	.....	.....	.....	.....	33.3	33.0
23.5	25.7	32.1	45.6	53.5	50.0	22.6	29.4	33.1	44.3	53.9	47.9
5.5	5.7	9.1	9.9	10.3	10.0	5.5	5.6	8.0	9.1	10.0	9.9
3.0	2.9	4.8	5.8	6.5	6.5	3.6	3.8	5.7	6.8	6.7	6.8
3.0	3.2	4.0	7.2	7.1	6.9	2.5	2.5	3.6	6.4	5.2	5.2
.....	.....	.....	.....	14.8	14.9	.....	.....	.....	.....	14.1	13.9
.....	.....	.....	.....	27.3	27.2	.....	.....	.....	.....	24.4	24.3
.....	.....	8.6	12.1	14.2	14.2	.....	.....	8.9	12.7	14.0	14.3
.....	.....	15.0	16.9	14.0	11.8	.....	.....	15.6	19.4	13.7	13.5
.....	.....	3.8	1.6	2.2	2.1	1.5	1.9	5.1	2.9	3.0	2.7
.....	.....	11.5	3.4	3.9	5.9	.....	.....	13.8	3.9	3.8	5.8
.....	.....	.....	.....	5.3	5.6	.....	.....	.....	.....	4.1	7.0
.....	.....	.....	.....	22.8	23.3	.....	.....	.....	.....	17.3	16.6
.....	.....	.....	.....	21.1	21.0	.....	.....	.....	.....	20.6	19.5
.....	.....	.....	.....	19.9	20.4	.....	.....	.....	.....	20.3	20.1
.....	.....	.....	.....	20.2	19.7	.....	.....	.....	.....	18.4	17.5
6.1	5.6	8.5	9.1	10.9	10.8	5.0	4.8	8.3	8.9	10.2	10.2
.....	.....	50.0	55.6	62.6	63.8	.....	.....	55.7	65.2	77.1	77.2
.....	.....	32.6	31.5	36.4	39.0	.....	.....	28.6	29.6	34.4	36.3
.....	.....	13.0	14.5	19.3	19.5	.....	.....	14.0	17.5	22.9	22.6
.....	.....	13.1	14.5	15.6	15.8	.....	.....	13.5	15.5	15.9	15.8
.....	.....	.....	.....	45.0	50.0	.....	.....	.....	.....	40.8	41.3
.....	.....	.....	.....	52.8	57.8	.....	.....	.....	.....	48.8	58.6

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.		Columbus, Ohio.	
		Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb...	51.4	51.2	36.0	37.7	37.7	39.7	35.5	36.1	37.8	38.4
Round steak.....	Lb...	48.6	49.2	33.2	35.2	36.8	39.5	34.1	34.5	36.3	36.7
Rib roast.....	Lb...	38.6	39.5	28.6	32.3	32.0	34.1	30.3	30.0	31.6	32.3
Chuck roast.....	Lb...	32.5	33.1	24.1	26.2	26.4	28.2	24.6	25.2	27.9	28.4
Plate beef.....	Lb...	22.2	21.9	16.9	19.3	21.4	22.1	22.7	23.0	22.3	22.9
Pork chops.....	Lb...	37.1	37.8	36.2	37.3	40.6	39.7	35.1	38.6	33.8	35.0
Bacon, sliced.....	Lb...	58.9	58.1	61.7	60.0	58.3	56.4	52.6	51.7	50.6	49.8
Ham, sliced.....	Lb...	59.6	59.5	52.5	55.6	52.1	52.1	52.7	53.0	53.6	53.8
Lamb.....	Lb...	37.4	40.0	32.1	34.2	40.0	41.1	34.0	36.4	30.7	35.0
Hens.....	Lb...	41.1	42.6	38.4	40.7	47.1	46.3	41.9	43.3	36.4	38.9
Salmon, canned.....	Lb...	37.1	37.7	40.5	43.2	30.5	30.1	29.2	29.2	30.0	30.9
Milk, fresh.....	Qt...	16.0	16.0	15.5	15.5	21.0	20.3	14.0	14.0	15.0	15.7
Milk, evaporated (unsweetened).....	( <sup>1</sup> )	16.6	15.9	17.1	15.4	17.3	15.1	15.5	14.1	15.9	15.1
Butter.....	Lb...	57.0	63.8	53.5	64.6	58.5	66.1	54.9	65.9	55.5	70.0
Oleomargarine.....	Lb...	38.2	37.3	43.0	44.0	41.5	40.9	37.8	37.4	37.8	37.5
Nut margarine.....	Lb...	35.9	36.2	41.0	42.0	40.3	39.7	35.1	34.1	35.0	35.1
Cheese.....	Lb...	42.5	42.6	43.6	41.3	42.4	39.9	38.9	40.0	41.3	39.8
Lard.....	Lb...	30.6	33.3	32.1	33.3	33.9	33.9	28.6	30.8	29.6	31.3
Crisco.....	Lb...	33.0	33.5	36.7	36.4	34.1	34.0	31.9	31.8	31.9	32.3
Eggs, strictly fresh.....	Doz...	67.7	62.2	49.5	55.8	55.3	50.9	41.0	42.5	42.4	41.0
Bread.....	Lb. <sup>2</sup>	10.0	10.0	10.0	10.6	10.0	10.0	9.7	9.9	9.5	9.6
Flour.....	Lb...	6.3	6.6	6.8	6.9	7.1	7.3	6.3	6.7	6.6	6.5
Cornmeal.....	Lb...	7.5	7.1	7.7	7.8	5.0	4.9	5.1	4.9	5.7	5.7
Corn flakes.....	( <sup>3</sup> )	13.7	13.9	13.9	14.4	14.9	15.0	13.3	13.8	14.3	14.3
Cream of Wheat.....	( <sup>4</sup> )	24.0	24.1	30.0	29.2	25.0	25.0	24.9	24.7	26.5	26.0
Rice.....	Lb...	14.0	13.9	12.7	12.9	12.5	12.3	13.6	13.6	12.8	12.9
Beans, navy.....	Lb...	15.5	13.7	13.5	11.7	16.4	14.4	11.6	11.3	11.8	11.9
Potatoes.....	Lb...	3.3	2.9	1.9	1.9	3.8	3.6	3.3	3.0	3.4	2.9
Onions.....	Lb...	4.4	5.2	3.9	4.4	4.9	6.7	3.6	5.2	4.3	5.8
Cabbage.....	Lb...	4.3	6.1	5.6	6.4	4.6	6.1	3.3	4.4	4.2	5.4
Beans, baked.....	( <sup>5</sup> )	17.3	17.5	23.3	22.1	18.3	17.0	16.8	16.0	18.3	17.4
Corn, canned.....	( <sup>6</sup> )	21.5	21.7	18.9	19.3	22.0	21.8	17.8	17.4	16.2	16.1
Peas, canned.....	( <sup>5</sup> )	21.2	21.0	19.1	19.0	22.7	22.8	17.0	17.2	16.5	16.1
Tomatoes, canned.....	( <sup>5</sup> )	18.9	18.1	19.0	18.5	15.7	15.4	15.6	14.8	15.3	14.4
Sugar, granulated.....	Lb...	10.5	10.4	11.9	11.9	10.6	10.6	10.5	10.5	10.7	10.7
Tea.....	Lb...	67.1	65.6	76.8	77.0	74.7	75.0	67.9	70.8	82.7	80.8
Coffee.....	Lb...	35.9	36.2	44.5	49.2	35.7	38.2	34.8	35.0	36.5	38.4
Prunes.....	Lb...	21.5	22.8	18.1	19.2	22.6	23.0	19.9	20.6	21.2	20.9
Raisins.....	Lb...	16.5	16.5	15.5	16.0	16.6	16.8	16.0	16.9	15.1	15.0
Bananas.....	Doz...	35.6	36.7	46.7	46.7	40.0	40.0	34.0	35.0	38.2	38.2
Oranges.....	Doz...	48.4	53.7	49.1	47.5	45.0	57.1	38.9	49.8	44.8	49.5

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.

OF FOOD FOR FEB. 15 AND MAR. 15, 1919, FOR 31 CITIES.

Dallas, Tex.		Fall River, Mass.		Houston, Tex.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.	
Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
42.8	44.8	59.5	59.8	37.9	39.5	37.0	38.3	41.1	42.5	37.8	39.2
41.8	43.8	50.0	50.1	38.2	39.3	36.4	37.8	38.6	40.0	35.0	36.2
35.8	36.6	35.6	37.2	30.8	33.2	27.6	28.6	31.2	33.5	27.4	29.1
32.4	33.5	29.5	31.3	27.9	30.0	26.2	26.8	27.8	27.8	24.5	25.3
26.8	28.1			24.8	26.2	20.6	21.0	20.9	21.3	20.4	20.6
38.5	40.5	35.3	36.4	37.4	38.6	37.1	37.8	38.6	38.3	33.6	35.3
62.2	60.0	51.9	51.6	63.2	62.4	52.8	54.3	58.1	56.2	58.3	54.0
56.9	57.5	53.7	53.9	52.8	52.2	55.1	56.4	54.6	54.7	54.4	53.1
43.6	41.0	36.2	39.6	38.8	40.0	45.0	45.0	35.4	36.3	33.6	34.3
33.3	36.2	44.2	44.1	38.5	47.5	34.1	36.3	39.1	42.4	34.4	35.5
31.6	31.7	31.3	30.5	31.3	29.6	26.4	26.7	30.8	29.5	32.7	31.4
19.0	20.0	16.0	16.0	19.7	18.7	13.7	12.7	18.0	18.0	16.0	15.0
16.3	16.2	15.6	15.8	16.5	15.9	16.6	15.1	16.7	15.4	17.6	15.8
56.2	64.5	55.5	62.6	56.4	64.2	53.3	65.4	62.3	67.0	55.6	65.1
36.8	35.3	38.8	38.7	39.3	39.1	40.3	39.8	40.8	40.3	38.1	37.4
38.6	36.9	35.6	36.6	38.3	37.2	35.9	35.4	38.3	36.3	35.1	35.2
42.2	40.5	40.9	41.6	37.5	39.5	40.6	41.5	42.5	39.9	40.7	41.1
34.5	35.5	30.8	33.2	30.9	31.9	31.7	32.9	33.3	33.4	34.5	35.2
33.4	32.9	31.8	33.0	32.0	33.9	33.5	34.1	33.8	32.8	35.2	35.0
40.6	40.3	73.9	62.2	39.0	39.6	44.5	42.3	49.1	46.8	45.4	45.9
10.0	10.0	10.0	10.0	8.8	8.9	9.9	9.5	10.0	10.0	9.3	10.0
7.0	7.0	6.7	7.0	7.0	7.1	6.6	6.8	7.1	7.1	6.4	6.4
6.4	6.5	7.4	7.8	5.9	5.6	5.3	5.2	5.1	5.1	6.4	6.0
15.8	15.0	14.7	14.4	14.4	14.1	14.4	14.6	14.4	14.6	14.9	14.8
25.6	25.2	25.3	25.2	24.7	24.7	25.2	25.9	25.5	25.3	25.0	25.0
13.5	13.0	13.4	13.4	12.0	11.8	14.2	14.0	12.4	12.0	13.4	13.1
14.7	13.6	13.9	13.1	14.7	13.2	11.1	11.0	15.3	14.5	14.0	13.0
3.4	3.0	3.2	3.0	3.3	3.4	2.7	2.6	3.8	3.4	2.8	2.7
5.1	7.5	4.6	6.2	4.8	6.1	4.3	6.5	5.4	6.7	4.7	8.9
4.9	5.6	4.1	6.8	3.6	3.7	4.4	4.7	5.3	4.8	4.4	5.3
21.4	20.4	18.3	18.2	19.7	19.3	19.4	19.6	19.3	18.5	16.6	17.2
20.6	19.5	20.3	21.6	18.6	18.3	19.4	18.9	21.5	21.2	17.8	17.3
20.4	19.3	19.6	20.0	19.6	19.1	17.9	18.3	21.5	20.2	17.7	17.8
17.8	16.1	18.9	17.4	14.6	14.1	17.6	16.2	15.6	14.5	17.4	16.2
11.2	11.2	10.8	10.6	10.8	10.8	11.0	11.0	10.9	10.5	11.3	11.1
78.1	78.0	62.1	62.0	60.7	64.4	83.1	83.6	81.4	82.9	79.7	77.2
39.3	40.7	37.2	38.1	32.9	33.5	37.9	39.3	40.5	39.9	37.1	38.6
20.9	21.8	18.4	20.1	19.7	20.6	18.3	19.7	21.6	21.3	19.0	19.0
17.1	16.8	15.8	16.2	17.3	16.5	17.8	20.5	18.3	17.4	18.2	19.3
36.7	36.3	28.8	35.8	31.7	32.5	26.2	29.4	33.3	37.5	41.4	41.3
47.8	47.2	40.9	53.0	45.2	48.7	45.9	48.3	40.5	47.1	52.3	55.6

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Little Rock, Ark.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.		Minneapolis, Minn.	
		Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.
Sirloin steak.....	Lb...	Cts. 41.3	Cts. 41.8	Cts. 37.7	Cts. 38.0	Cts. 53.6	Cts. 55.4	Cts. 39.2	Cts. 40.4	Cts. 33.5	Cts. 35.2
Round steak.....	Lb...	38.8	38.8	36.2	37.0	48.1	49.9	36.7	37.9	31.4	33.0
Rib roast.....	Lb...	34.2	34.6	31.3	31.8	33.2	33.0	30.9	31.9	28.1	29.3
Chuck roast.....	Lb...	28.7	29.1	27.6	27.5	29.8	30.4	26.8	27.8	23.9	24.3
Plate beef.....	Lb...	24.1	25.0	23.1	23.2	.....	.....	23.0	23.5	18.7	18.9
Pork chops.....	Lb...	33.3	38.1	34.9	35.1	35.5	36.1	35.7	37.1	33.9	35.2
Bacon, sliced.....	Lb...	60.0	59.2	57.9	56.3	51.0	50.1	57.8	58.4	43.3	57.4
Ham, sliced.....	Lb...	53.3	53.6	53.8	53.3	49.1	48.7	51.5	52.3	52.5	53.6
Lamb.....	Lb...	40.0	42.5	40.0	36.4	37.2	38.5	36.9	36.7	31.6	33.4
Hens.....	Lb...	34.7	34.7	41.3	44.0	43.8	43.4	34.0	36.0	33.7	35.1
Salmon, canned.....	Lb...	30.5	30.1	30.4	29.7	30.9	31.1	33.7	34.6	36.7	37.2
Milk, fresh.....	Qt...	18.5	18.5	15.0	15.0	15.0	15.0	18.0	18.0	13.0	13.0
Milk, evaporated (unsweetened). (1)	Lb...	16.3	15.8	15.2	15.0	18.1	16.9	16.5	16.3	15.0	15.3
Butter.....	Lb...	54.3	65.5	56.8	68.3	59.7	68.1	58.9	68.7	50.8	62.2
Oleomargarine.....	Lb...	39.4	39.3	40.6	40.3	38.2	38.6	41.3	41.2	36.4	37.1
Nut margarine.....	Lb...	40.0	38.8	35.0	35.7	35.2	34.2	40.0	39.4	31.8	32.1
Cheese.....	Lb...	40.5	41.7	39.9	40.0	40.1	40.1	39.1	39.3	35.5	36.8
Lard.....	Lb...	33.2	33.6	30.2	32.4	31.9	32.9	32.8	34.5	31.0	32.3
Crisco.....	Lb...	34.4	33.2	32.4	33.3	33.8	33.7	32.8	32.9	33.2	33.7
Eggs, strictly fresh.....	Doz...	43.5	41.5	43.2	41.9	63.5	60.7	43.7	43.6	41.8	42.7
Bread.....	Lb. <sup>2</sup> ...	10.0	10.0	9.8	9.8	9.3	9.3	10.0	10.0	9.2	9.2
Flour.....	Lb...	6.9	7.1	6.8	6.8	6.7	6.8	7.2	7.2	6.2	6.4
Corn meal.....	Lb...	5.4	5.1	4.9	5.0	7.5	7.3	5.1	5.1	5.3	5.3
Corn flakes.....	(3)	14.8	15.0	13.8	13.5	15.0	15.0	14.5	14.3	14.3	14.2
Cream of Wheat.....	(4)	25.0	25.0	25.3	25.2	25.0	25.2	24.5	24.6	25.2	25.2
Rice.....	Lb...	13.0	12.9	13.3	13.0	13.1	13.3	12.3	12.4	13.6	13.7
Beans, navy.....	Lb...	13.8	13.3	13.9	13.0	14.0	12.5	13.5	13.4	9.8	9.8
Potatoes.....	Lb...	3.4	3.1	2.4	2.3	2.7	2.5	3.1	2.9	2.4	2.3
Onions.....	Lb...	5.0	6.5	4.1	6.4	4.1	5.4	4.6	7.2	3.2	4.6
Cabbage.....	Lb...	5.2	6.0	4.9	6.1	3.5	4.3	4.2	4.8	2.8	3.7
Beans, baked.....	(5)	20.3	19.1	17.6	16.3	19.5	18.8	19.6	19.2	18.6	20.0
Corn, canned.....	(5)	19.4	19.4	19.6	18.6	22.2	21.9	18.7	18.8	16.3	16.6
Peas, canned.....	(5)	19.1	20.8	19.2	18.7	21.2	21.0	18.2	17.9	15.4	17.1
Tomatoes, canned.....	(5)	17.6	15.7	15.6	15.4	22.8	21.5	15.1	15.2	16.3	16.4
Sugar, granulated.....	Lb...	10.9	11.1	10.8	10.7	10.7	10.7	10.8	10.8	11.0	10.9
Tea.....	Lb...	80.8	86.4	79.0	79.8	62.7	63.1	83.1	83.7	58.9	61.0
Coffee.....	Lb...	39.2	42.1	37.0	37.3	39.8	41.2	38.3	39.2	38.6	40.4
Prunes.....	Lb...	17.2	17.5	19.7	21.0	19.5	20.2	20.8	22.5	22.2	21.8
Raisins.....	Lb...	14.0	18.8	13.7	16.4	16.5	16.2	16.8	16.7	15.2	15.8
Bananas.....	Doz...	35.6	35.6	36.7	37.1	32.5	34.5	33.8	35.0	35.6	39.3
Oranges.....	Doz...	56.7	57.3	41.2	48.1	46.9	51.8	45.2	51.1	46.0	53.4

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.



FOOD FOR FEB. 15 AND MAR. 15, 1919, FOR 31 CITIES—Continued.

Mobile, Ala.		Newark, N. J.		New Haven, Conn.		Norfolk, Va.		Omaha, Nebr.	
Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
35.3	35.7	47.3	48.1	55.3	55.5	46.7	47.9	37.0	38.6
35.1	35.4	47.6	48.3	49.5	49.7	42.0	43.2	35.3	36.5
30.7	31.2	40.2	40.5	38.4	38.8	37.2	38.9	28.3	30.3
25.8	27.1	33.8	33.4	33.6	33.3	31.3	34.0	25.0	26.3
22.7	24.5	25.3	25.1	-----	-----	22.8	21.8	18.8	19.1
41.0	41.8	39.4	39.7	36.5	37.4	36.2	39.1	33.3	36.1
62.5	61.1	49.9	49.7	57.9	56.8	56.6	55.7	58.4	58.8
55.0	54.0	55.0	55.0	58.4	58.2	42.2	42.0	55.0	55.9
36.1	37.8	40.3	42.8	40.1	41.1	43.2	44.3	29.4	31.9
39.4	43.6	41.6	42.8	41.4	42.9	46.2	45.8	33.9	37.1
30.9	31.0	34.7	36.4	34.3	35.9	34.1	34.2	31.4	31.9
18.3	18.3	18.0	15.5	16.0	16.0	18.0	21.5	15.0	13.8
17.6	16.2	15.5	14.3	15.7	15.3	16.8	15.0	17.0	16.8
59.3	68.7	61.4	69.5	57.2	63.5	62.3	67.1	52.5	64.9
41.0	41.1	39.6	39.4	39.3	38.7	43.8	43.3	39.5	40.1
-----	37.0	36.0	35.8	36.6	36.5	39.5	38.0	36.2	36.0
42.3	40.2	43.5	44.2	42.9	42.3	41.2	40.6	39.5	38.8
33.7	34.0	32.8	33.5	31.7	33.7	24.5	35.1	33.5	35.1
34.0	33.5	32.2	31.4	34.0	34.0	33.6	33.9	33.6	32.9
48.6	43.4	63.8	58.6	68.5	60.7	49.8	46.5	44.7	45.3
9.7	9.7	9.8	9.9	10.0	10.0	9.9	9.9	10.0	10.0
7.2	7.2	6.8	6.9	6.3	6.4	6.9	6.9	6.3	6.3
5.9	5.5	6.9	7.0	7.8	7.4	5.6	5.9	5.9	5.6
14.7	14.7	12.8	12.6	14.1	14.0	14.0	14.3	14.7	14.9
25.3	25.3	23.8	23.8	24.6	24.6	24.8	25.3	25.4	25.2
12.9	12.8	14.2	13.6	14.3	14.1	14.2	14.8	14.1	13.9
15.7	13.9	13.8	13.1	15.2	14.6	14.3	12.1	13.3	14.3
4.1	3.8	3.9	3.6	3.2	2.8	3.0	3.0	2.6	2.5
4.7	6.0	5.1	6.2	4.8	6.3	5.2	7.2	4.2	6.4
4.8	5.2	3.9	5.6	4.3	5.7	5.6	6.5	4.2	5.5
19.8	18.9	16.8	15.7	18.9	18.7	15.2	14.8	21.8	21.5
20.0	19.0	21.9	19.7	21.5	21.7	23.4	24.6	18.5	17.2
19.6	19.1	19.8	19.5	21.8	21.9	22.9	23.3	19.7	18.1
15.2	15.6	17.5	15.1	18.3	18.1	16.4	15.5	18.0	17.4
10.9	10.8	10.0	10.0	10.3	10.1	10.4	10.3	10.8	10.9
73.3	73.6	59.2	57.7	64.3	65.5	84.4	86.3	72.6	75.9
34.2	34.9	34.4	35.4	38.5	39.1	39.9	40.9	38.3	40.3
21.4	20.3	21.8	22.2	24.4	24.4	21.3	22.7	20.8	20.7
20.0	19.4	15.5	15.5	16.4	16.5	16.1	16.3	17.2	17.1
30.0	30.0	37.7	39.0	33.8	35.6	35.8	38.6	40.0	39.3
45.7	54.7	59.0	60.8	53.5	58.9	48.6	70.0	49.2	52.4

\* 28-ounce package.

\* No. 2 can.

## AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Peoria, Ill.		Portland, Me.		Portland, Oreg.		Providence, R. I.		Richmond, Va.	
		Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.
Sirloin steak.....	Lb...	<i>Cts.</i> 42.1	<i>Cts.</i> 36.3	<i>Cts.</i> 58.1	<i>Cts.</i> 61.1	<i>Cts.</i> 33.6	<i>Cts.</i> 35.2	<i>Cts.</i> 65.6	<i>Cts.</i> 65.5	<i>Cts.</i> 44.4	<i>Cts.</i> 44.8
Round steak.....	Lb...	33.3	35.3	49.7	53.0	31.6	33.1	53.1	53.3	41.8	41.8
Rib roast.....	Lb...	26.5	27.8	33.9	35.1	29.9	31.6	42.5	42.3	35.2	35.7
Chuck roast.....	Lb...	24.4	25.9	29.3	30.2	23.9	25.4	36.5	36.3	31.6	31.4
Plate beef.....	Lb...	19.4	20.4			19.2	20.4			25.6	25.0
Pork chops.....	Lb...	33.1	35.5	36.6	37.6	41.1	41.2	41.2	39.6	36.8	37.6
Bacon, sliced.....	Lb...	57.9	56.8	52.4	52.1	57.3	58.1	52.7	52.1	51.1	50.7
Ham, sliced.....	Lb...	54.6	55.0	54.8	54.2	54.9	55.4	60.9	60.3	49.0	49.6
Lamb.....	Lb...	35.5	37.0	36.1	38.2	34.6	38.7	41.2	43.5	40.7	42.1
Hens.....	Lb...	34.0	38.4	43.3	44.5	40.3	41.8	43.6	44.5	42.9	42.6
Salmon, canned.....	Lb...	30.5	30.3	29.9	29.3	32.7	36.1	35.2	35.6	28.4	28.2
Milk, fresh.....	Qt...	11.9	11.9	16.0	16.0	15.5	14.7	16.4	16.5	15.5	16.0
Milk, evaporated (unsweetened).....	(1)	18.0	16.0	15.9	15.8	16.1	15.0	16.3	15.9	15.5	15.4
Butter.....	Lb...	54.1	64.8	60.2	66.8	56.2	68.3	57.3	64.7	61.7	68.5
Oleomargarine.....	Lb...	39.9	39.6	39.0	39.2	41.5	40.7	36.9	36.6	40.4	39.8
Nut margarine.....	Lb...	36.3	35.9	35.6	35.4	38.0	36.5	33.6	33.8	37.8	37.3
Cheese.....	Lb...	40.6	40.9	41.9	42.0	42.8	40.2	40.7	41.9	43.1	41.4
Lard.....	Lb...	32.1	34.3	31.9	34.9	34.2	34.5	32.4	34.4	33.5	33.7
Crisco.....	Lb...	33.2	33.6	33.6	33.6	35.7	35.2	34.7	33.8	33.3	33.8
Eggs, strictly fresh.....	Doz...	40.0	44.1	62.6	59.1	49.8	45.9	69.9	60.5	49.9	45.2
Bread.....	Lb. <sup>2</sup> ...	10.0	10.0	10.0	10.0	9.8	9.9	10.0	10.0	10.0	10.0
Flour.....	Lb...	7.0	7.0	6.4	6.5	6.6	6.5	6.5	7.0	6.8	6.8
Corn meal.....	Lb...	6.0	5.9	6.6	6.0	7.3	7.4	6.1	5.8	5.7	5.4
Corn flakes.....	(3)	14.9	14.9	13.8	14.1	14.7	14.6	13.9	14.2	14.6	14.6
Cream of Wheat.....	(4)	26.2	26.4	25.1	24.6	28.9	28.2	24.3	24.6	24.8	24.8
Rice.....	Lb...	14.0	14.0	14.0	13.9	13.8	13.6	13.3	13.5	14.7	14.7
Beans, navy.....	Lb...	13.8	13.0	13.4	13.3	12.7	11.1	13.5	12.1	15.3	14.3
Potatoes.....	Lb...	2.7	2.5	2.8	2.5	2.2	2.0	2.9	2.8	3.3	2.8
Onions.....	Lb...	4.6	6.7	4.1	6.4	3.3	4.9	4.1	5.9	5.2	6.8
Cabbage.....	Lb...	4.4	6.1	2.5	3.1	4.7	4.7	3.7	5.4	4.7	6.3
Beans, baked.....	(6)	19.6	19.0	21.9	22.0	24.3	24.4	17.6	18.4	16.9	16.7
Corn, canned.....	(6)	17.2	17.0	21.6	21.9	20.8	22.3	19.4	19.9	20.0	19.2
Peas, canned.....	(6)	19.0	18.9	19.9	20.4	21.0	21.7	19.7	19.9	21.2	21.3
Tomatoes, canned.....	(6)	16.1	16.3	20.6	21.7	18.6	20.3	18.7	18.0	18.2	18.5
Sugar, granulated.....	Lb...	11.1	11.1	10.5	10.4	10.8	10.8	10.6	10.5	10.9	10.8
Tea.....	Lb...	71.4	71.8	64.7	63.6	62.3	61.1	62.5	63.4	78.9	80.1
Coffee.....	Lb...	36.2	35.9	37.5	38.3	38.0	39.7	40.0	41.2	35.5	36.2
Prunes.....	Lb...	21.0	22.6	20.3	20.5	14.8	15.2	20.1	21.4	18.9	19.6
Raisins.....	Lb...	16.8	17.6	15.2	15.3	15.6	15.3	15.5	15.6	16.1	16.2
Bananas.....	Doz...	<sup>8</sup> 9.6	<sup>8</sup> 10.0	35.0	37.5	43.5	45.0	35.0	38.0	41.5	41.8
Oranges.....	Doz...	47.5	48.2	55.4	61.3	53.3	57.5	52.2	59.3	44.6	57.1

<sup>1</sup> 15-16 ounce can.<sup>2</sup> Baked weight.<sup>3</sup> 8-ounce package.

FOOD FOR FEB. 15 AND MAR. 15, 1919, FOR 31 CITIES—Concluded.

Rochester, N. Y.		St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.	Feb., 1919.	Mar., 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
39.2	39.5	36.4	36.9	34.1	36.8	46.5	47.6	33.1	35.7
37.3	37.5	31.9	33.5	32.7	34.3	42.3	43.2	33.1	35.0
32.2	32.7	29.2	31.8	27.9	29.7	38.0	38.2	27.8	29.5
29.8	30.1	25.0	26.7	24.0	26.1	31.8	32.5	24.9	26.0
30.2	22.3	18.6	19.2	18.7	20.1	22.8	22.8	20.4	22.1
38.1	38.3	32.0	35.4	40.5	39.5	39.8	39.4	34.3	35.9
49.6	48.6	53.3	53.9	60.0	59.5	60.0	57.3	53.8	53.3
51.6	51.9	52.5	52.9	52.3	53.5	58.9	55.0	49.1	49.7
35.7	36.8	29.8	32.0	32.8	32.6	40.3	42.2	35.4	35.0
43.7	44.3	33.7	36.3	35.7	36.6	45.1	45.3	32.0	35.7
30.9	30.4	31.7	31.5	32.7	33.3	32.2	32.9	32.0	32.5
14.0	13.5	13.0	13.0	12.5	12.5	14.0	14.0	14.3	14.3
16.8	15.2	14.9	14.9	16.6	14.9	15.2	15.4	17.4	17.3
57.6	65.5	51.9	63.0	54.4	66.3	56.9	62.1	56.0	66.9
40.8	40.9	37.9	38.1	40.0	40.0	38.9	38.4	40.2	39.7
33.5	33.9	33.9	33.1	39.3	39.4	35.5	36.0	37.4	36.2
40.9	40.8	38.0	36.9	38.3	37.3	41.4	40.3	41.0	40.9
32.5	32.8	31.7	34.0	34.5	34.6	32.3	33.4	32.2	33.5
32.8	32.8	34.3	34.1	36.1	36.2	33.4	33.8	34.4	35.0
54.3	51.6	41.4	42.1	48.1	48.8	57.0	51.9	42.3	46.4
10.0	9.9	8.6	8.8	10.0	10.0	10.0	10.0	10.0	10.0
6.5	6.6	6.3	6.5	5.6	5.6	7.0	6.9	6.7	6.6
6.3	6.4	6.0	5.8	7.5	7.4	6.4	6.8	6.6	6.1
13.6	13.7	14.8	14.9	14.8	14.8	14.1	14.0	14.7	14.7
24.3	24.4	25.8	25.4	25.7	26.0	24.7	24.8	26.8	26.4
14.0	14.0	14.0	13.5	13.7	13.0	13.2	13.1	13.8	13.4
13.4	12.1	11.8	10.5	14.2	12.7	15.4	14.5	13.6	12.8
2.5	2.4	2.1	2.1	2.1	2.0	2.7	2.6	3.9	2.7
3.4	5.7	3.3	4.6	4.6	5.0	4.2	5.5	4.5	6.4
4.5	4.0	3.5	4.4	5.2	5.5	3.6	4.1	4.2	4.8
16.4	16.2	20.2	19.8	20.4	17.9	16.5	16.2	19.3	19.1
21.4	20.7	17.9	17.6	18.3	18.0	20.3	19.6	17.6	16.7
19.2	19.3	16.8	16.7	17.9	18.0	18.1	17.8	18.0	17.4
19.7	18.6	18.8	16.5	15.7	16.6	18.9	17.8	17.6	17.3
10.4	10.3	11.1	11.1	11.4	11.1	10.6	10.3	10.9	10.9
61.1	60.8	58.3	59.5	68.0	68.0	64.6	64.2	80.0	81.1
34.4	34.9	36.3	36.3	40.4	42.5	36.3	35.8	36.3	37.0
21.2	20.8	19.4	21.0	17.5	18.6	19.5	19.4	18.6	19.8
15.1	15.2	15.4	15.6	15.2	15.2	14.7	14.8	17.2	18.0
39.8	40.5	40.0	50.0	45.7	44.3	31.8	34.1	36.0	40.0
47.3	53.1	45.4	51.4	48.8	48.8	45.9	49.5	49.3	52.0

\* 28-ounce package.

\* No. 2 can.

\* Per pound.

**INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES, 1918  
TO MARCH, 1919.**

A strong reaction took place in the trend of wholesale prices in the United States during March, the bureau's weighted index number rising to 200, as compared with 197 for February. Decided changes occurred in several of the commodity groups, the index for farm products increasing from 215 to 225, food, etc., from 193 to 200, and articles classed as miscellaneous from 207 to 218. A smaller increase was shown for lumber and building materials. On the other hand, cloths and clothing dropped from 220 to 214, and metals and metal products from 167 to 161. Smaller decreases were registered in the groups of fuel and lighting and chemicals and drugs, while no change occurred in the group of house-furnishing goods.

Among the important articles whose wholesale price averaged higher in March than in February were flaxseed, barley, corn, oats, rye, wheat, hay, cattle, hogs, sheep, poultry, tobacco, butter, cheese, coffee, rye flour, wheat flour, fruits, glucose, lard, corn meal, bacon, beef, hams, lamb, mutton, cabbage, raw silk, cement, lime, linseed oil, rope, and whisky. Peanuts, beans, milk, oleomargarine, tea, carpets, cotton and woolen goods, hosiery, coal, coke, bar iron, copper, copper wire, pig iron, bar silver, steel, zinc, rosin, glycerin, sulphuric acid, nitrate of soda, jute, wrapping paper, rubber, and soap averaged lower in price, while cotton, canned goods, eggs, rice, sugar, vinegar, prunes, brick, and shoes remained practically unchanged in price.

In the period from March, 1918, to March, 1919, the index number of farm products increased from 211 to 225, that of food, etc., from 178 to 200, and that of fuel and lighting from 171 to 179. During the same time the index number of lumber and building materials increased from 142 to 163, that of house-furnishing goods, which is built on a limited number of tableware articles, from 188 to 233, and that of miscellaneous commodities, including such important articles as cottonseed meal, jute, malt, lubricating oil, newsprint paper, rubber, starch, soap, plug tobacco, whisky, and woodpulp, from 184 to 218. On the other hand the index number of cloths and clothing decreased from 220 to 214, that of metals and metal products from 175 to 161, and that of chemicals and drugs from 217 to 171.



INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED MONTHS, 1913, TO MARCH, 1919,  
BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm prod- ucts.	Food, etc.	Cloths and cloth- ing.	Fuel and light- ing.	Metals and metal prod- ucts.	Lum- ber and build- ing mate- rials.	Chem- icals and drugs.	House- furnish- ing goods.	Mis- cella- neous.	All com- modi- ties.
<b>1913.</b>										
Average for year....	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	99	107	100	101	100	100	99
April.....	97	96	100	99	102	101	100	100	99	98
July.....	101	101	100	100	98	101	99	100	102	101
October.....	103	102	100	100	99	98	100	100	100	101
<b>1914.</b>										
January.....	101	102	99	99	92	98	101	103	98	100
April.....	103	95	100	98	91	99	101	103	99	98
July.....	104	103	100	90	85	97	101	103	97	99
October.....	103	107	98	87	83	96	109	103	95	99
<b>1915.</b>										
January.....	102	106	96	86	83	94	106	101	98	98
April.....	107	105	98	84	91	94	102	101	97	99
July.....	108	104	99	81	102	94	107	101	96	101
October.....	105	101	103	90	100	93	121	101	99	101
<b>1916.</b>										
January.....	108	111	110	102	126	99	110	105	107	110
April.....	111	117	119	105	147	102	150	109	111	116
July.....	118	121	126	105	145	98	113	111	122	119
October.....	136	140	137	128	151	101	135	114	152	133
<b>1917.</b>										
January.....	147	150	161	170	183	106	141	128	157	150
February.....	150	160	162	178	190	108	146	129	158	165
March.....	162	161	163	181	199	111	151	129	140	160
April.....	180	182	169	178	208	114	155	151	144	171
May.....	196	191	173	187	217	117	161	151	148	181
June.....	196	187	179	193	239	127	165	162	153	184
July.....	198	180	187	183	257	132	185	165	151	185
August.....	204	180	193	159	249	133	198	165	156	184
September.....	203	178	193	155	228	134	203	165	155	182
October.....	207	183	194	142	182	134	242	165	164	180
November.....	211	184	202	151	173	135	232	175	165	182
December.....	204	185	206	153	173	135	230	175	166	181
<b>1918.</b>										
January.....	205	188	209	169	173	136	216	188	178	185
February.....	207	186	213	171	175	137	217	188	181	187
March.....	211	178	220	171	175	142	217	188	181	187
April.....	217	179	230	170	176	145	214	188	193	191
May.....	212	178	231	172	177	147	209	188	197	191
June.....	214	179	213	171	177	148	205	192	199	193
July.....	221	185	219	178	183	152	202	192	192	198
August.....	229	191	251	178	183	156	207	227	191	202
September.....	236	199	251	179	183	158	206	233	195	207
October.....	223	199	253	179	186	157	201	233	197	204
November.....	219	203	253	182	186	163	201	233	207	206
December.....	221	207	246	183	183	163	182	233	204	206
<b>1919.</b>										
January.....	220	204	231	181	172	160	179	233	206	202
February.....	215	193	220	181	167	162	173	233	207	197
March <sup>1</sup> .....	225	200	214	179	161	163	171	233	218	200

<sup>1</sup> Preliminary.

## CHANGES IN WHOLESALE PRICES IN THE UNITED STATES.

Decreases in the wholesale price of many important commodities in the United States during the first quarter of 1919 are shown by information collected by the Bureau of Labor Statistics in representative markets. Among the articles showing a decrease are butter, eggs, milk, oats, rye, rye flour, potatoes, cotton, wool, cotton and

wool textiles, coal, coke, copper, pig iron, steel, and spelter. On the other hand, some articles, as cattle, hogs, sheep, bacon, lard, mutton, wheat, wheat flour, corn, barley, and leather increased in price during the quarter. A few articles, as beef, rice, sugar, hides, pig tin, pig lead, and petroleum, showed practically no change in price.

Comparing prices in January with those at the beginning of 1918, it is seen that a number of commodities were much higher. Conspicuous examples of these are cattle, beef, hogs, hams, butter, milk, sugar, shoes, and coal. Decreases between these two dates are shown for sheep, mutton, corn, oats, rye, rye flour, barley, potatoes, cotton, cotton yarn, wool, worsted yarn, hides, coke, copper, pig iron, steel, pig tin, and pig lead.

WHOLESALE PRICES IN JULY, 1914, 1915, 1916, AND 1917, AND IN CERTAIN MONTHS OF 1918 AND 1919, AS COMPARED WITH AVERAGE PRICES IN 1913.

## AVERAGE MONEY PRICES.

Article.	Unit.	1913	July—				1918.				1919.			
			1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.	
FOODSTUFFS.														
(a) Animal.														
Cattle, good to choice steers.	100 lbs...	\$ 8.507	\$ 9.219	\$ 9.213	\$ 9.985	\$ 12.560	\$ 13.113	\$ 15.175	\$ 17.625	\$ 17.856	\$ 18.413	\$ 18.469	\$ 18.555	
Beef, fresh, good native steers.	Lb.....	.130	.135	.132	.141	.164	.175	.205	.240	.245	.245	.245	.245	
Beef, salt, extra mess.	Bbl....	18.923	17.250	17.500	18.250	30.500	31.590	31.900	34.875	35.500	35.500	35.500	35.500	
Hogs, heavy.....	100 lbs...	8.365	8.769	7.281	9.825	15.460	16.300	17.150	17.720	17.850	17.538	17.638	18.055	
Bacon, short clear sides.	Lb.....	.127	.141	.111	.157	.248	.293	.271	.276	.286	.289	.283	.305	
Hams, smoked, loose.	Lb.....	.166	.177	.161	.190	.240	.295	.308	.303	.336	.349	.334	.328	
Lard, prime, contract.	Lb.....	.110	.102	.081	.131	.201	.250	.258	.264	.266	.238	.252	.280	
Pork, salt, mess..	Bbl....	22.471	23.625	18.500	27.167	42.250	50.400	53.200	48.500	42.500	50.375	49.625	50.125	
Sheep, ewes.....	100 lbs...	4.687	4.538	5.469	6.545	8.600	11.144	14.950	10.975	9.469	9.556	10.375	12.550	
Mutton, dressed..	Lb.....	.103	.095	.109	.131	.145	.192	.243	.205	.151	.176	.191	.214	
Butter, creamery, extra.	Lb.....	.310	.270	.261	.276	.376	.487	.415	.432	.554	.618	.493	.602	
Eggs, fresh, firsts..	Doz....	.226	.187	.169	.223	.318	.557	.336	.374	.497	.579	.379	.389	
Milk.....	Qt.....	.035	.030	.030	.031	.050	.081	.059	.054	.082	.091	.081	.076	
(b) Vegetable.														
Wheat, No. 1, northern.	Bu.....	.874	.897	1.390	1.170	2.582	2.170	2.170	2.170	2.216	2.223	2.235	2.328	
Wheat flour, standard patent.	Bbl....	4.584	4.594	7.031	6.109	12.750	10.085	9.985	10.702	10.210	10.275	10.550	11.213	
Corn, No. 2, mixed.	Bu.....	.625	.710	.783	.808	2.044	1.775	1.665	1.635	1.385	1.401	1.295	1.485	
Corn meal.....	100 lbs...	1.599	1.780	1.750	1.982	4.880	4.835	5.350	4.825	3.370	3.150	2.838	3.150	
Oats, standard, in store.	Bu.....	.376	.369	.529	.405	.764	.799	.872	.765	.693	.653	.578	.627	
Rye, No 2.....	Bu.....	.636	.618	1.036	.966	2.226	1.915	2.648	1.705	1.625	1.613	1.367	1.708	
Rye flour.....	Bbl....	3.468	3.075	5.533	5.035	11.417	10.356	13.687	10.500	9.169	8.738	8.000	8.600	
Barley, fair to good malting.	Bu.....	.625	.533	.743	.746	1.391	1.534	1.722	1.125	.957	.956	.900	.981	
Rice, Honduras, head.	Lb.....	.051	.054	.049	.045	.070	.079	.087	.094	.091	.091	.090	.091	
Potatoes, white...	Bu.....	.614	1.206	.444	.863	2.375	1.272	.687	1.035	.993	1.084	1.001	1.001	
Sugar, granulated.	Lb.....	.043	.042	.058	.075	.075	.074	.073	.074	.088	.088	.088	.088	

<sup>1</sup> Standard war flour.

WHOLESALE PRICES IN JULY, 1914, 1915, 1916, AND 1917, AND IN CERTAIN MONTHS OF 1918 AND 1919, AS COMPARED WITH AVERAGE PRICES IN 1913—Continued.

## AVERAGE MONEY PRICES—Concluded.

Article.	Unit.	1913	July—				1918				1919		
			1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
TEXTILES AND LEATHER GOODS.													
Cotton, upland, middling.	Lb.....	\$0.128	\$0.131	\$0.092	\$0.130	\$0.261	\$0.324	\$0.317	\$0.312	\$0.0325	\$0.296	\$0.263	\$0.273
Cotton yarn, carded, 10/1.	Lb.....	.221	.215	.160	.253	.450	.536	.616	.641	.610	.455	.416	.400
Sheeting, brown, Pepperell.	Yd.....	.073	.070	.060	.078	.140	.171	.240	(1)	(1)	.191	.168	.154
Bleached muslin, Lonsdale.	Yd.....	.082	.085	.075	.088	.160	.180	.230	.250	.250	.209	.186	.186
Wool, 1/4 and 3/8 grades, scoured.	Lb.....	.471	.444	.557	.686	1.200	1.455	1.455	1.437	1.437	1.200	1.091	1.200
Worsted yarn, 232's.	Lb.....	.777	.650	.850	1.100	1.600	2.000	2.150	2.150	2.150	1.750	1.700	1.500
Clay worsted suitings, 16-oz.	Yd.....	1.382	1.328	1.508	2.000	3.250	4.065	4.275	4.450	(1)	(1)	3.150	3.150
Storm serge, all-wool, 50-in.	Yd.....	.563	.505	.539	.760	1.176	1.308	1.308	1.470	1.642	1.642	1.642	1.054
Hides, packers' heavy native steers.	Lb.....	.184	.194	.258	.270	.330	.328	.272	.324	.300	.280	.280	.276
Leather, chrome calf.	Sq. ft...	.270	.275	.280	.460	.540	.530	.550	.640	.630	.660	.680	.680
Leather, sole, oak.	Lb.....	.449	.475	.495	.635	.815	.830	.800	.830	.770	.785	.815	.815
Shoes, men's, Goodyear welt, vicicalf, blucher.	Pair....	3.113	3.150	3.250	3.750	4.750	4.750	5.000	5.645	6.500	6.500	6.500	6.500
Shoes, women's, Goodyear welt, gun metal, button.	Pair....	2.175	2.260	2.350	2.750	3.500	3.500	3.500	4.500	4.850	4.850	4.850	4.850
MINERAL AND METAL PRODUCTS													
Coal, anthracite, chestnut.	2,240 lbs.	5.313	5.241	5.200	5.507	5.933	6.600	6.370	6.693	7.000	8.050	8.050	8.004
Coal, bituminous, run of mine.	2,000 lbs.	2.200	2.200	2.200	2.200	5.000	3.600	3.600	4.100	4.100	4.100	4.000	4.000
Coke, furnace, prompt.	2,000 lbs.	2.538	2.000	2.750	2.750	15.000	6.000	6.000	6.000	6.000	5.781	5.219	4.469
Copper, electrolytic.	Lb.....	.157	.134	.199	.265	.318	.235	.235	.255	.260	.204	.173	.151
Copper wire, bare, No. 8.	Lb.....	.167	.148	.210	.325	.338	.263	.263	.285	.290	.228	.205	.174
Pig iron, Bessemer.	2,240 lbs.	17.133	14.900	14.950	21.950	57.450	37.250	36.150	36.600	36.600	33.600	33.600	32.538
Steel billets.....	2,240 lbs.	25.789	19.000	21.380	41.000	100.000	47.500	47.500	47.500	47.500	43.500	43.500	42.250
Tin plate, domestic, coke.	100 lbs..	3.558	3.350	3.175	5.875	12.000	7.750	7.750	7.750	7.750	7.350	7.350	7.263
Pig tin.....	Lb.....	.449	.311	.391	.389	.620	.842	.880	.932	.796	.715	.724	.725
Pig lead.....	Lb.....	.044	.039	.058	.069	.114	.068	.070	.080	.081	.056	.051	.052
Spelter.....	Lb.....	.058	.051	.220	.113	.093	.079	.070	.087	.091	.074	.067	.065
Petroleum, crude.	Bbl.....	2.450	1.750	1.350	2.600	3.100	3.750	4.000	4.000	4.000	4.000	4.000	4.000
Petroleum, refined, water-white.	Gal....	.123	.120	.120	.120	.120	.160	.168	.171	.175	.175	.175	.181
Gasoline, motor..	Gal....	.168	.140	.120	.240	.240	.240	.240	.241	.245	.245	.245	.245

<sup>1</sup> No quotation.

WHOLESALE PRICES IN JULY, 1914, 1915, 1916, AND 1917, AND IN CERTAIN MONTHS OF 1918 AND 1919, AS COMPARED WITH AVERAGE PRICES IN 1913—Concluded.

## RELATIVE PRICES.

Article.	1913	July—					1918				1919		
		1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.	
FOODSTUFFS.													
(a) Animal.													
Cattle, good to choice steers.	100	108.4	108.3	117.4	147.6	154.1	178.4	207.2	209.9	216.4	217.1	218.4	
Beef, fresh, good native steers.	100	103.8	101.5	108.5	126.2	134.6	157.7	184.6	188.5	188.5	188.5	188.5	
Beef, salt, extra mess.	100	91.2	92.5	96.4	161.2	166.5	168.6	184.3	187.6	187.6	187.6	187.6	
Hogs, heavy.	100	104.8	87.0	117.5	184.8	194.9	205.0	211.8	213.4	209.7	210.9	226.6	
Bacon, short clear sides.	100	111.0	87.4	123.6	195.3	230.7	213.4	217.3	225.2	227.6	222.8	240.2	
Hams, smoked, loose.	100	106.6	97.0	114.5	144.0	177.7	185.5	182.5	202.4	210.2	201.2	203.6	
Lard, prime, contract.	100	92.7	73.6	119.1	182.7	227.3	234.5	240.0	241.8	216.4	229.1	254.5	
Pork, salt, mess.	100	105.1	82.3	120.9	188.0	224.3	236.7	215.8	189.1	224.2	220.8	223.1	
Sheep, ewes.	100	96.8	116.7	139.6	183.5	237.8	319.0	234.2	202.0	203.9	221.4	267.8	
Mutton, dressed.	100	92.2	105.8	127.2	140.8	186.4	235.9	199.0	146.6	170.9	185.4	207.8	
Butter, creamery, extra.	100	87.1	84.2	89.0	121.3	157.1	133.9	139.4	178.7	199.4	159.0	191.2	
Eggs, fresh, firsts.	100	82.7	74.8	98.7	140.7	246.5	146.0	165.5	219.9	256.2	167.7	172.1	
Milk.	100	85.7	85.7	88.6	142.9	231.4	168.6	154.3	234.3	260.0	231.4	217.1	
(b) Vegetable.													
Wheat, No. 1, northern.	100	102.6	159.0	133.9	295.4	248.3	248.3	248.3	253.5	254.3	255.7	266.4	
Wheat flour, standard patent.	100	100.2	153.4	133.1	278.1	220.0	217.8	233.5	222.7	224.1	230.1	244.6	
Corn, No. 2, mixed.	100	113.6	125.3	129.3	327.0	284.0	266.4	266.4	221.6	224.2	207.2	237.6	
Corn meal.	100	111.3	109.4	124.0	305.2	302.4	334.6	301.8	210.8				
Oats, standard, in store.	100	98.1	140.7	107.7	203.2	212.5	231.9	203.5	184.3	173.7	153.7	166.8	
Rye, No. 2.	100	97.2	162.9	151.9	350.0	301.1	416.4	268.1	255.5	253.6	214.9	246.5	
Rye flour.	100	88.7	159.5	145.2	329.2	298.6	394.7	302.8	264.4	252.0	230.7	248.2	
Barley, fair to good malting.	100	85.3	118.9	119.4	222.6	245.4	275.5	180.0	153.1	153.0	144.0	157.0	
Rice, Honduras, head.	100	105.9	96.1	88.2	137.3	154.9	170.6	184.3	178.4	178.4	176.5	178.4	
Potatoes, white.	100	196.4	72.3	140.6	386.8	207.2	111.9	168.6	161.7	176.5	163.0	163.0	
Sugar, granulated.	100	97.7	134.9	174.4	174.4	172.1	169.8	172.1	204.7	204.7	204.7	204.7	
TEXTILES AND LEATHER GOODS.													
Cotton, upland, middling.	100	102.3	71.9	101.6	203.9	233.1	247.7	243.8	253.9	231.3	205.5	213.3	
Cotton yarn, carded, 10 l.	100	97.3	72.4	114.5	203.6	242.5	278.7	289.6	276.0	205.9	188.2	181.0	
Sheeting, brown, Pepperell.	100	95.9	82.2	106.8	191.8	231.2	328.8	(?)	(?)	261.6	230.1	211.0	
Bleached muslin, Lonsdale.	100	103.7	91.5	107.3	195.1	219.5	280.5	304.9	304.9	254.9	226.8	226.8	
Wool, 1 to 2 grades, scoured.	100	94.3	118.3	145.6	254.8	308.9	308.9	305.1	305.1	254.8	231.6	254.8	
Worsted yarn, 2/32s.	100	83.7	109.4	141.6	205.9	257.4	276.7	276.7	276.7	225.2	218.8	193.1	
Clay worsted suitings, 16-ounce.	100	96.1	109.1	144.7	235.2	294.1	309.3	322.0	(?)	(?)	227.9	227.9	
Storm serge, all wool, 50-inch.	100	89.7	95.7	135.0	208.9	232.3	232.3	261.1	291.7	291.7	291.7	187.2	
Hides, packers, heavy native steers.	100	105.4	140.2	146.7	179.3	178.3	147.8	176.1	163.0	152.2	152.2	150.0	
Leather, chrome calf.	100	101.9	103.7	170.4	200.0	196.3	203.7	237.0	233.3	244.4	251.9	231.9	
Leather, sole, oak.	100	105.8	110.2	141.4	181.5	184.9	178.2	184.9	171.5	174.8	181.5	181.5	
Shoes, men's, Goodyear welt, vici calf, blucher.	100	101.2	104.4	120.5	152.6	152.6	160.6	181.3	208.8	208.8	208.8	208.8	
Shoes, women's, Goodyear welt, gun metal, button.	100	103.9	108.1	126.4	160.9	160.9	160.9	206.9	223.0	223.0	223.0	223.0	
MINERAL AND METAL PRODUCTS.													
Coal, anthracite, chestnut.	100	98.6	97.9	103.7	111.7	124.2	119.9	126.0	131.8	151.5	151.5	150.6	
Coal, bituminous, run of mine.	100	100.0	100.0	100.0	227.3	162.7	162.7	186.4	186.4	186.4	181.8	181.8	
Coke, furnace, prompt shipment.	100	78.8	69.0	108.4	591.0	236.4	236.4	236.4	236.4	227.8	205.6	176.1	
Copper, electrolytic.	100	85.4	126.8	168.8	202.5	149.7	149.7	162.4	165.6	129.9	110.2	96.2	
Copper wire, bare, No. 8.	100	88.6	125.7	195.6	202.4	157.5	157.5	170.7	173.7	136.5	122.8	104.2	
Pig iron, Bessemer.	100	87.0	87.3	128.1	335.3	217.4	211.0	213.6	213.6	196.1	196.1	189.9	
Steel billets.	100	73.7	82.9	159.0	387.8	184.2	184.2	184.2	184.2	168.7	168.7	163.8	
Tin plate, domestic, coke.	100	94.2	89.2	165.1	337.3	217.8	217.8	217.8	217.8	206.6	206.6	204.1	
Pig tin.	100	69.3	87.1	86.6	138.1	187.5	196.0	207.6	177.3	159.2	161.2	161.5	
Pig lead.	100	88.6	131.8	156.8	259.1	154.5	159.1	181.8	184.1	127.3	115.9	118.2	
Spelter.	100	87.9	379.3	194.8	160.3	136.2	120.7	151.7	156.9	127.6	115.5	112.1	
Petroleum, crude.	100	71.4	55.1	106.1	126.5	153.1	163.3	163.3	163.3	163.3	163.3	163.3	
Petroleum, refined, water-white.	100	97.6	97.6	97.6	97.6	130.1	136.6	139.0	142.3	142.3	142.3	147.2	
Gasoline, motor.	100	83.3	71.4	142.9	142.9	142.9	142.9	143.5	145.8	145.8	145.8	145.8	

<sup>1</sup> Standard war flour.

<sup>2</sup> No quotation.



### COST OF LIVING IN THE UNITED STATES.

The Bureau of Labor Statistics in cooperation with the National War Labor Board has been making an investigation into the cost of living in industrial centers in the United States. This investigation covered 92 cities or localities in 42 States, the cities varying in size from New York to small country towns of a few thousand population. In selecting these cities it was the aim of the bureau to get representative data that would show living conditions in all sections of the country and in all kinds of localities.

The data were secured through personal visits by agents of the bureau to the homes of wage earners and small-salaried men, where, by means of interviews with the wife or other members of the family, information was obtained relative to the income and expenditures of the family for a period of one year.

The requirements to be met in order to be scheduled were, that—

1. The family must be that of a wage earner or salaried worker, but not of a person in business for himself. The families taken should represent proportionally the wage earners and the low or medium salaried families of the locality.
2. The family must have as a minimum a husband and wife and at least one child who is not a boarder or lodger.
3. The family must have kept house in the locality for the entire year covered.
4. At least 75 per cent of the family income must come from the principal breadwinner or others who contribute all earnings to family fund.
5. All items of income or expenditure of members other than those living as lodgers must be obtainable.
6. The family may not have boarders nor over three lodgers either outsiders or children living as such.
7. The family must have no subrental other than furnished rooms for lodgers.
8. Slum or charity families or non-English speaking families who have been less than five years in the United States should not be taken.

Requirement 6 has been construed not to refer to or include relatives, servants, nurses, etc., temporarily in the home, who were furnished board free.

Data showing expenditures were grouped under six divisions, namely: food, clothing, housing, fuel and light, furniture and furnishings, and miscellaneous items. Each group was subdivided

into a number of items in order to show as specifically as possible just what articles were purchased.

The summary table on pages 150 to 165 shows the results of the investigation for 22 cities in the Atlantic coast States. The period covered by the investigation in these cities varied from the year ending July 31 to the year ending November 30, 1918.

In addition to giving the average number of persons per family in each group of families, the table shows the average "equivalent number of adult males" per family. This number is based on the sex and age of the members of the family and the number of weeks each person was in the family during the year. Careful studies and comparisons of food consumption have led to the following assumption: That, as a rule, using the food consumed by an adult male (one 15 years of age or over) as a basis, the following table may be constructed:

Adult male.....	=	1.00
Adult female.....	=	.90
Child 11 to 14 years.....	=	.90
Child 7 to 10 years.....	=	.75
Child 4 to 6 years.....	=	.40
Child 3 years or under...	=	.15

With these figures to represent the food consumption in one year by the different members of a family, respectively, and taking into consideration the number of weeks each member of the family was in the home, the number of equivalent adult males has been computed and entered in the table, and thus the different families and groups of families can be reduced to the same basis for the purpose of comparing the expenditures for food. No system has been devised by which satisfactory comparisons between families can be made with reference to expenditures other than for food, although probably comparisons on the above basis would be about as accurate as any that could be made.

The other columns of the table are self-explanatory.

There is a noticeable agreement in the per cent of expenditure for the several groups of items respectively between the several cities. As between income groups the actual amount spent for food increased with the income, while as a rule, the per cent of expenditure devoted to food decreased with the increase of income. The per cent expended for clothing clearly increased with the income, while miscellaneous expenditures, which include insurance, church, religious and labor organizations, gifts to charity, street-car fares, movies, payments on account of illness, and all other expenses not provided for in any of the specific groups named, increased with the income, but not with

the same degree of regularity. The per cent of expenditure for rent and for fuel and light, while decreasing slightly with the increase of income, does not seem to bear much comparative relation to income, nor is there apparently any relation between income and per cent of expenditure for furniture and house furnishings. Data from other cities will be published in the MONTHLY LABOR REVIEW from time to time.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS.

**BALTIMORE, MD.: White Families.**

Income group.	Number of families.	Average yearly expenses per family for—					Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average plus for group.
		Average persons in family.		Food.	Clothing.	Rent.	Fuel and light.	Furniture and furnishings.	Miscellaneous.	Families having—	Average amount.		
Under \$900.....	13	3.9	2.79	\$82.94	\$99.04	\$126.44	\$45.93	\$17.02	\$159.01	9	\$23.38	2	\$15.65
\$900 and under \$1,200....	77	4.7	3.19	468.66	138.92	1,156.82	153.22	32.81	196.28	42	46.04	27	46.29
\$1,200 and under \$1,500....	60	4.8	3.16	546.88	186.53	201.65	67.96	61.77	245.09	47	66.29	11	80.27
\$1,500 and under \$1,800....	30	5.1	3.64	598.85	263.22	218.59	71.35	94.81	329.45	22	126.16	5	88.25
\$1,800 and under \$2,100....	9	5.8	4.18	720.61	363.98	188.89	76.62	68.77	349.94	9	113.53		113.53
\$2,100 and under \$2,500....	4	5.8	4.83	786.01	424.31	161.75	87.21	431.70	515.56	4	191.00		191.00
\$2,500 and over.....	2	8.0	5.04	878.13	549.90	307.00	116.00	71.93	735.43	2	58.89		58.89
Total.....	195	4.8	3.32	529.38	190.17	1,176.18	362.53	54.30	248.47	135	73.64	45	57.53
												15	37.70

**PER CENT.**

Under \$900.....	6.7	.....	.....	46.5	12.0	14.6	5.6	2.1	19.3	69.2	.....	15.4	.....
\$900 and under \$1,200....	39.5	.....	.....	44.8	13.3	115.0	15.1	3.1	18.8	54.5	.....	35.1	.....
\$1,200 and under \$1,500....	30.8	.....	.....	41.8	14.2	15.4	5.2	4.7	18.7	78.3	.....	18.3	.....
\$1,500 and under \$1,800....	15.4	.....	.....	38.8	16.9	12.1	4.6	6.1	21.4	73.3	.....	16.7	.....
\$1,800 and under \$2,100....	4.6	.....	.....	40.7	20.7	10.7	4.3	3.9	19.8	100.0	.....	10.0	.....
\$2,100 and under \$2,500....	2.1	.....	.....	37.3	20.1	7.7	4.1	6.3	24.5	100.0	.....	10.0	.....
\$2,500 and over.....	1.0	.....	.....	33.0	20.7	11.5	4.4	2.7	27.7	100.0	.....	10.0	.....
Total.....	100.0	.....	.....	42.0	15.1	14.0	5.0	4.3	19.7	69.2	.....	23.1	.....
												7.7	.....

**BALTIMORE, MD.: Colored Families.**

Under \$900.....	10	5.3	3.33	\$365.49	\$102.97	\$130.04	\$56.24	\$14.88	\$109.70	2	\$64.00	1	\$7.00	7	\$12.10
\$900 and under \$1,200....	48	4.8	3.15	442.74	140.40	183.98	70.17	24.12	185.18	15	38.96	8	24.42	25	8.11
\$1,200 and under \$1,500....	40	6.0	3.76	530.23	194.57	203.88	85.19	43.95	222.58	13	37.09	4	25.19	15	16.95
\$1,500 and under \$1,800....	6	7.7	4.64	674.64	275.40	258.25	99.59	43.33	278.88	2	32.50	1	221.62	3	4.26.10
\$1,800 and under \$2,100....	3	6.7	4.53	705.29	339.28	171.50	67.12	71.94	598.87	3	150.00				150.00
\$2,100 and under \$2,500....															
\$2,500 and over.....															
Total.....	106	5.9	3.52	695.97	170.00	190.10	70.01	31.00	202.31	43	40.66	14	37.48	50	13.85



## PER CENT.

Under \$900.....	9.3	46.9	13.2	16.7	7.2	1.9	14.1	100.0	20.0	10.0	70.0
\$900 and under \$1,200.....	44.9	42.3	13.4	17.6	6.7	2.3	17.7	100.0	31.3	16.7	52.1
\$1,200 and under \$1,500.....	37.4	42.3	15.0	15.7	5.6	3.4	17.1	100.0	52.5	10.0	37.5
\$1,500 and under \$1,800.....	5.6	41.4	16.9	15.8	6.1	2.7	17.1	100.0	33.3	16.7	50.0
\$1,800 and under \$2,100.....	2.8	40.9	19.7	9.9	3.9	4.2	21.4	100.0	100.0		
\$2,100 and under \$2,500.....											
\$2,500 and over.....											
Total.....	100.0	42.5	14.6	16.3	6.5	2.8	17.3	100.0	40.2	13.1	46.7

BOSTON, MASS.

	6	7	2-7	\$437.63	\$119.19	\$33.42	\$118.29	\$891.87	3	\$41.67	2	\$177.69	1	\$338.40
Under \$900.....	97	4.7	2.91	497.95	142.90	71.51	186.58	1,092.90	33	39.64	43	78.33	21	421.23
\$900 and under \$1,200.....	160	4.9	3.22	578.73	166.41	77.97	223.72	1,266.19	100	80.61	42	72.94	18	31.24
\$1,200 and under \$1,500.....	69	5.7	3.85	738.82	243.80	85.32	291.13	1,605.17	14	91.18	6	84.19	5	48.99
\$1,500 and under \$2,100.....	42	6.3	4.48	793.71	218.71	137.44	377.73	1,819.08	32	134.24	6	95.36	4	88.66
\$2,100 and under \$2,500.....	20	6.0	4.44	857.84	369.63	99.45	407.11	2,128.88	16	246.40	1	354.61	3	179.39
\$2,500 and over.....	13	7.7	6.39	1,269.68	546.96	117.07	519.25	2,736.38	12	240.88	1	491.76	.....	194.33
Total.....	407	5.3	3.54	640.50	222.33	679.88	262.71	1,438.13	246	102.35	109	86.11	52	358.2

## PER CENT.

[illegible]

4. Test file.

\* Not including a families in which part is combined with food and light.

Not including 7 families in which toxic is combined with toxic and light.

<sup>a</sup> Not including  $g$  frontlines in which front is combined with foot and light.

1 Not including 2 families in which root is combined with mel and lert.

3. Not including 3 families in which the i is combined with /u/ and /i/.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS—Continued.

## BRIDGEPORT, CONN.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and furnishings.	Miscellaneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	1	3.0	2.30	\$224.90	\$137.08	\$240.00	\$82.35	\$15.60	\$129.32	\$929.25	11	\$58.21	1	\$69.00	.....	1 \$69.00
\$900 and under \$1,200.....	25	4.3	2.78	460.43	173.53	2189.33	2 69.22	56.97	195.44	1,145.91	.....	.....	12	154.19	.....	1 48.40
\$1,200 and under \$1,500.....	44	4.2	2.76	514.00	219.84	2 240.58	2 80.80	68.15	282.45	1,386.10	23	80.80	18	145.81	.....	3 117.41
\$1,500 and under \$1,800.....	41	4.4	2.91	532.99	268.17	2 256.36	2 83.04	91.56	311.01	1,543.29	33	108.07	7	163.34	.....	58.75
\$1,800 and under \$2,100.....	9	5.3	3.56	622.24	359.51	2 297.38	2 90.04	79.63	381.86	1,829.67	6	133.67	3	68.13	.....	66.40
\$2,100 and under \$2,500.....	16	4.9	3.54	704.73	345.41	277.50	94.23	165.82	471.95	2,059.64	13	318.83	3	261.21	.....	210.07
\$2,500 and over.....	7	6.9	5.73	905.57	506.67	295.14	109.01	99.23	511.93	2,427.55	7	451.49	.....	.....	.....	451.49
Total.....	143	4.6	3.09	556.08	261.90	3 246.53	3 82.96	85.71	306.89	1,540.24	93	152.39	44	152.03	6	52.33

## PER CENT.

Under \$900.....	0.7	.....	.....	35.0	14.8	25.8	8.9	1.7	13.9	100.0	.....	.....	100.0	.....	.....	.....
\$900 and under \$1,200.....	17.5	.....	.....	40.2	15.1	216.7	2 6.1	5.0	17.1	100.0	44.0	.....	48.0	.....	8.0	.....
\$1,200 and under \$1,500.....	30.8	.....	.....	37.1	15.9	217.3	2 5.8	4.9	18.9	100.0	52.3	.....	40.9	.....	6.8	.....
\$1,500 and under \$1,800.....	28.7	.....	.....	34.5	17.4	216.8	2 5.4	5.9	20.2	100.0	80.5	.....	17.1	.....	2.4	.....
\$1,800 and under \$2,100.....	6.3	.....	.....	34.0	19.6	216.1	2 4.9	4.4	20.9	100.0	66.7	.....	33.3	.....	.....	.....
\$2,100 and under \$2,500.....	11.2	.....	.....	34.2	16.8	13.5	4.6	8.1	22.9	100.0	81.3	.....	18.8	.....	.....	.....
\$2,500 and over.....	4.9	.....	.....	37.3	20.9	12.2	4.5	4.1	21.1	100.0	100.0	.....	.....	.....	.....	.....
Total.....	100.0	.....	.....	36.1	17.0	3 16.0	3 5.4	5.6	19.9	100.0	65.0	.....	30.8	.....	4.2	.....

## BUFFALO, N. Y.

Under \$900.....	6	4.2	2.58	\$361.76	\$102.54	\$152.33	\$55.39	\$37.87	\$140.28	\$850.16	3	\$45.42	1	\$124.40	2	1 \$18.76
\$900 and under \$1,200.....	42	3.9	2.45	417.10	136.40	173.89	54.72	65.98	205.19	1,073.27	27	69.02	8	83.79	7	28.41
\$1,200 and under \$1,500.....	83	4.6	3.02	478.99	222.80	218.01	2 65.03	63.41	243.94	1,291.47	20	117.83	3	114.12	3	57.63
\$1,500 and under \$1,800.....	60	4.7	3.05	538.39	295.36	228.42	76.41	91.24	293.40	1,493.24	46	160.73	10	97.60	4	105.96
\$1,800 and under \$2,100.....	39	5.0	3.74	601.57	325.93	257.90	85.15	85.64	381.73	1,737.92	34	213.41	3	117.05	4	177.04
\$2,100 and under \$2,500.....	14	4.7	3.91	713.06	403.87	269.82	87.19	146.65	563.50	2,124.10	11	241.93	3	181.00	2	151.36
\$2,500 and over.....	12	5.8	4.47	797.13	440.39	321.16	94.78	142.31	644.24	2,432.22	11	401.48	1	68.00	.....	362.36
Total.....	256	4.6	3.15	526.49	254.87	225.45	2 71.48	81.39	300.09	1,400.00	132	160.40	47	109.35	17	100.27

## PER CENT.

Under \$900	12.1	17.9	6.5	4.5	16.5	100.0	50.0	33.3	16.7
\$900 and under \$1,200	42.6	12.1	17.9	6.5	4.5	16.5	100.0	50.0	16.7
\$1,200 and under \$1,500	38.9	14.6	16.2	5.1	6.1	19.1	100.0	64.3	16.7
\$1,500 and under \$1,800	37.1	17.3	16.0	25.0	4.9	18.9	100.0	72.3	3.6
\$1,800 and under \$2,100	36.1	17.8	13.3	5.1	6.1	19.6	100.0	76.7	6.7
\$2,100 and under \$2,500	34.6	18.8	15.6	4.9	22.0	22.0	100.0	87.2	5.1
\$2,500 and over	33.6	19.0	12.7	4.1	6.9	23.7	100.0	21.4	
	32.7	18.0	13.2	3.9	5.8	26.4	100.0	8.3	
Total	36.1	17.5	215.4	24.9	5.6	20.6	100.0	18.4	6.6

## CHAMBERSBURG, PA.

	4	3.5	2.66	\$224.19	\$123.05	\$106.90	\$336.07	\$13.65	\$117.83	\$762.98	3	\$93.27	1	\$13.50		\$46.58
Under \$900.....	27	4.5	2.98	459.07	176.81	2106.90	2 66.75	77.08	162.39	1 052.92	17	73.90	7	98.01	3	21.12
\$1,200 and under \$1,500.....	24	4.7	3.10	481.45	218.98	130.94	85.23	74.95	232.52	1 214.67	22	135.24	1	70.30	1	121.05
\$1,500 and under \$1,800.....	14	6.3	4.22	670.21	285.37	137.16	102.96	67.15	237.36	1 490.41	13	127.23	1	20.65	1	116.66
\$1,800 and under \$2,100.....	5	5.0	2.97	583.22	280.06	190.95	109.95	138.33	318.85	1 500.41	5	256.85	1			256.85
\$2,100 and under \$2,500.....	2	5.5	4.65	701.60	464.75	198.00	118.55	108.45	493.23	2 081.58	1	320.00	1	29.15		145.43
\$2,500 and over.....	1	8.0	6.75	985.00	513.40	132.00	70.85	129.00	193.18	2 023.83	1	820.67				820.67
Total.....	77	4.9	3.29	517.32	225.65	2125.40	2 81.11	76.78	214.71	1 241.90	62	138.55	11	74.52	4	100.92

## PER CENT.

[illegible]

### 1. Deficit.

Not including 1 family in which rent is combined with fuel and light.

a Not including 4 families in which rent is combined with fuel and light.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS.—Continued.

## DOVER, N. J.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average surplus plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	12	4.1	2.78	\$437.53	\$179.49	\$179.59	\$59.45	\$95.38	\$188.54	\$1,133.57	3	\$40.07	7	\$43.42	2	\$816.19
\$900 and under \$1,200....	18	5.2	3.43	521.35	231.42	197.33	80.42	75.14	238.49	1,345.16	13	85.83	4	108.66	1	37.84
\$1,200 and under \$1,500....	21	5.2	3.09	539.62	261.51	206.50	78.05	108.46	363.33	1,557.47	19	122.25	2	26.00		108.13
\$1,500 and under \$2,100....	10	5.0	3.41	611.20	308.35	195.20	84.77	159.85	534.36	1,893.73	7	200.65	3	337.00		38.94
\$2,100 and under \$2,500....	6	6.3	3.72	642.25	324.86	287.00	111.29	151.06	427.57	1,944.03	6	243.04				243.04
\$2,500 and over.....	7	6.9	5.39	883.78	634.94	218.23	91.70	174.12	559.57	2,562.35	7	210.95				210.95
Total.....	74	5.3	3.44	569.17	287.68	1206.38	180.79	115.09	351.51	1,008.92	55	143.53	16	112.63	3	82.32

## PER CENT.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average surplus plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	16.2			38.6	16.8	15.8	15.2	8.4	16.6	100.0	25.0		58.3		16.7	
\$900 and under \$1,200....	24.3			38.8	17.2	14.7	6.0	5.7	17.7	100.0	72.2		22.2		5.6	
\$1,200 and under \$1,500....	28.4			34.6	16.8	13.3	5.0	7.0	23.3	100.0	90.5		9.5			
\$1,500 and under \$2,100....	13.5			32.3	16.3	10.3	4.5	8.4	28.2	100.0	70.0		30.0			
\$2,100 and under \$2,500....	8.1			33.0	16.7	14.8	5.7	7.8	22.0	100.0	100.0					
\$2,500 and over.....	9.5			34.5	24.8	8.5	3.6	6.8	21.8	100.0	100.0					
Total.....	100.0			35.4	17.9	12.8	15.0	7.2	21.8	100.0	74.3		21.6		4.1	

## FALL RIVER, MASS.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average surplus plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	12	4.6	3.10	\$394.26	104.72	\$105.10	\$58.72	\$27.78	\$135.64	\$826.23	1	\$69.00	7	\$54.19	4	\$25.86
\$900 and under \$1,200....	56	4.8	3.01	493.40	145.34	123.46	63.17	39.94	191.99	1,058.30	26	53.93	19	67.26	11	7.44
\$1,200 and under \$1,500....	48	5.4	3.76	624.43	199.33	133.02	68.38	50.51	216.87	1,292.54	29	84.19	9	75.97	10	36.61
\$1,500 and under \$2,100....	20	5.6	4.10	694.88	263.00	147.58	80.77	56.50	279.14	1,551.87	17	109.86	1	144.00	2	86.18
\$2,100 and under \$2,500....	9	6.2	4.37	762.81	305.81	175.25	88.54	74.89	357.48	1,764.47	8	208.49			1	185.33
\$2,500 and over.....	7	7.7	6.08	930.51	461.68	152.32	97.76	85.09	345.22	2,072.58	6	270.78			1	232.09
Total.....	158	5.4	3.73	610.06	215.74	131.61	70.66	53.68	235.82	1,320.84	92	101.35	37	71.35	29	43.79



## PER CENT.

[illegible]

JOHNSTOWN, N. Y.

	5	3-2	2-25	\$120.47	\$109.90	\$74.22	\$19.68	\$158.94	\$806.44	4	\$21.80*	1	\$56.90	.....	\$6.06
Under \$900.....	26	4.2	2.75	500.69	165.05	148.31	46.78	184.41	1,125.50	11	79.82	14	97.89	.....	18.94
\$900 and under \$1,200.....	33	4.7	3.11	557.16	219.91	183.13	65.87	184.33	1,340.38	21	95.70	11	90.46	1	30.74
\$1,200 and under \$1,500.....	7	5.0	3.30	562.11	260.90	195.43	97.21	275.00	1,510.40	5	107.26	2	13.95	.....	72.63
\$1,500 and under \$1,800.....	5	5.0	3.72	635.35	286.69	205.20	51.60	691.46	1,913.16	4	321.16	1	987.98	.....	39.53
\$1,800 and under \$2,100.....	1	8.0	6.25	830.00	440.00	240.00	224.00	339.00	2,263.00	1	129.00	.....	.....	.....	129.00
\$2,100 and under \$2,500.....	1	5.0	4.80	726.07	294.74	180.00	4.20	794.82	2,134.40	1	452.40	.....	.....	.....	432.40
Total.....	78	4.5	3.06	536.04	206.99	148.51	79.68	200.98	1,308.51	47	114.41	29	118.56	2	24.98

## PER CENT.

Under \$900.....	6.4	40.1	14.9	13.6	9.2	2.4	19.7	100.0	80.0	20.0	
\$900 and under \$1,200.....	33.3	41.5	14.7	12.3	8.0	4.2	16.4	100.0	42.3	57.8	3.8
\$1,200 and under \$1,500.....	42.3	41.6	16.4	10.5	7.0	4.9	19.6	100.0	63.6	36.3	3.0
\$1,500 and under \$1,900.....	9.0	37.2	17.3	12.9	7.9	6.4	18.2	100.0	71.4	28.6	
\$1,900 and under \$2,100.....	6.4	34.3	15.0	10.7	5.9	2.7	31.4	100.0	80.0	20.0	
\$2,100 and under \$2,500.....	1.3	37.6	19.4	10.6	7.0	9.9	15.5	100.0	100.0		
\$2,500 and over.....	1.3	34.2	13.8	8.4	6.2	4.2	37.2	100.0	100.0		
Total.....	100.0	41.0	15.8	11.3	7.4	4.6	19.9	100.0	60.3	39.7	2.6

<sup>1</sup> Not including 1 family in which rent is combined with fuel and light.

<sup>2</sup> Deficit.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS—Continued.

LAWRENCE, MASS.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Aver-age sur-plus for group.
		Total.	Equiv-a-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	4	4.5	3.05	\$421.42	\$115.14	\$148.06	\$61.80	\$17.94	\$150.13	\$915.79	1	\$65.00	3	\$116.02	.....	1 \$70.77
\$900 and under \$1,200.....	19	4.9	3.16	526.80	159.29	160.47	67.19	30.47	177.50	1,121.73	6	41.51	8	130.51	.....	1 41.85
\$1,200 and under \$1,500.....	32	5.6	3.62	601.38	208.60	163.58	72.43	50.26	207.36	1,303.62	22	82.23	8	80.48	.....	2 36.42
\$1,500 and under \$1,800.....	24	4.9	3.18	652.02	273.24	191.58	85.55	87.33	257.56	1,547.28	20	132.53	2	379.00	.....	2 78.86
\$1,800 and under \$2,100.....	17	5.2	3.98	742.55	324.50	190.35	84.92	91.60	334.27	1,768.20	16	218.39	.....	.....	1	205.54
\$2,100 and under \$2,500.....	7	5.1	4.10	764.02	362.58	179.14	69.80	159.11	449.20	1,983.85	7	239.71	.....	.....	.....	239.71
\$2,500 and over.....	6	7.2	6.09	1,075.01	560.16	214.08	105.48	161.40	586.84	2,705.97	6	375.20	.....	.....	.....	375.20
Total.....	109	5.3	3.64	651.46	258.06	176.59	77.72	73.51	267.32	1,504.67	78	156.38	21	133.05	10	86.27

PER CENT.

Under \$900.....	3.7	.....	.....	46.0	12.4	16.2	7.1	2.0	16.4	100.0	25.0	.....	75.0	.....	.....	.....
\$900 and under \$1,200.....	17.4	.....	.....	47.0	14.2	14.3	6.0	2.7	15.8	100.0	31.6	.....	42.1	.....	26.3	.....
\$1,200 and under \$1,500.....	29.4	.....	.....	46.1	16.0	12.5	5.6	3.9	15.9	100.0	68.8	.....	25.0	.....	6.3	.....
\$1,500 and under \$1,800.....	22.0	.....	.....	42.1	17.7	12.4	5.5	5.6	16.6	100.0	83.3	.....	8.3	.....	8.3	.....
\$1,800 and under \$2,100.....	15.6	.....	.....	42.0	18.4	10.8	4.8	5.2	18.9	100.0	94.1	.....	.....	.....	5.9	.....
\$2,100 and under \$2,500.....	6.4	.....	.....	38.5	18.3	9.0	3.5	8.0	22.6	100.0	100.0	.....	.....	.....	.....	.....
\$2,500 and over.....	5.5	.....	.....	39.7	20.7	7.9	3.9	6.1	21.7	100.0	100.0	.....	.....	.....	.....	.....
Total.....	100.0	.....	.....	43.3	17.2	11.7	5.2	4.9	17.8	100.0	71.6	.....	19.3	.....	9.2	.....

MANCHESTER, N. H.

Under \$900.....	2	3.5	2.52	\$329.38	\$94.95	\$108.00	\$57.04	\$52.10	\$157.21	\$795.68	1	\$20.00	.....	.....	1	\$10.00
\$900 and under \$1,200.....	26	4.5	2.07	468.37	148.53	143.49	83.68	40.04	206.12	1,090.22	11	56.38	12	\$98.66	3	17.84
\$1,200 and under \$1,500.....	41	5.3	3.22	551.67	183.32	157.53	92.40	55.40	240.56	1,280.88	31	97.40	9	67.26	1	58.80
\$1,500 and under \$1,800.....	24	5.7	3.94	654.85	230.35	174.22	96.01	41.28	287.20	1,483.91	20	190.81	4	167.26	.....	131.13
\$1,800 and under \$2,100.....	11	6.0	4.57	726.75	299.81	198.91	112.08	87.09	267.81	1,692.45	10	249.71	.....	.....	1	227.01
\$2,100 and under \$2,500.....	6	5.8	5.02	715.14	402.16	213.00	123.58	130.31	370.25	1,954.45	6	351.17	.....	.....	.....	351.17
\$2,500 and over.....	2	6.5	5.94	962.19	659.65	222.00	124.21	105.10	484.87	2,558.01	2	361.85	.....	.....	.....	361.85
Total.....	112	5.3	3.51	583.76	215.41	165.15	94.69	56.76	255.06	1,370.83	81	158.07	25	83.93	6	95.58

## PER CENT.

[illegible]

## NEWARK, N. J.

Under \$900.	2	4.0	2.50	\$366.00	\$76.20	\$114.00	\$39.99	\$18.44	\$121.00	\$735.92	1	\$107.50	1	\$107.50
\$900 and under \$1,200.....	33	4.8	3.22	481.68	146.73	161.24	57.48	25.88	189.63	1,062.65	18	62.81	10	9.36
\$1,200 and under \$1,500.....	46	4.3	2.92	553.05	190.56	197.37	68.76	37.57	250.06	1,297.37	34	83.47	5	45.16
\$1,500 and under \$1,800.....	37	5.0	3.18	608.54	265.32	209.58	73.63	63.23	323.50	1,543.81	25	156.28	3	108.37
\$1,800 and under \$2,100.....	16	5.1	3.93	710.67	296.32	243.00	78.07	63.48	393.14	1,784.68	14	219.13	.....	167.88
\$2,100 and under \$2,500.....	11	4.8	4.01	686.79	404.78	249.75	76.90	85.75	574.72	2,028.29	11	301.51	.....	301.51
\$2,500 and over.....	6	5.7	5.09	931.66	520.31	245.33	91.10	69.02	547.35	2,407.77	6	418.74	.....	418.74
Total.....	147	4.7	3.32	589.56	236.95	247.41	60.54	48.16	303.23	1,445.41	109	154.86	19	99.22

## PER CENT.

[illegible]

#### Deficit.

<sup>a</sup> Not including 1 family in which rent is combined with fuel and light.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS—(Continued).

## NEW YORK, N. Y.

Income group.	Num-ber of fam-ilies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Aver- age sur- plus for group.
		Total.	Equiva- lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur- nishings.	Miscel- laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	16	4.2	2.76	\$396.84	\$88.27	\$107.57	\$47.71	\$18.74	\$136.85	\$868.30	7	\$21.03	6	\$117.60	3	\$34.90
\$900 and under \$1,200....	107	4.5	2.98	510.88	153.31	317.42	357.54	29.50	175.77	1,109.86	47	44.47	37	146.08	23	230.98
\$1,200 and under \$1,500....	151	4.7	3.15	584.40	193.95	420.68	459.05	49.93	228.22	1,343.54	89	65.26	33	194.87	29	24.12
\$1,500 and under \$1,800....	115	4.7	3.38	646.53	277.01	623.63	567.13	49.58	301.74	1,581.92	79	109.81	22	137.98	14	49.04
\$1,800 and under \$2,100....	66	4.9	3.62	736.52	309.84	623.98	669.61	62.87	333.13	1,790.78	50	175.05	7	123.54	1	119.41
\$2,100 and under \$2,500....	38	6.3	4.07	844.84	423.77	327.61	885.23	88.07	487.22	2,192.80	26	239.35	11	232.68	1	96.41
\$2,500 and over.....	25	7.4	5.87	1,106.89	599.50	735.73	790.51	90.00	616.74	2,853.22	19	250.04	6	259.45	.....	127.76
Total.....	518	4.9	3.45	640.92	253.98	\$214.62	\$64.30	51.05	284.55	1,525.66	317	114.97	122	168.51	79	30.67

## PER CENT.

Under \$900.....	3.1	.....	.....	45.7	10.2	120.0	15.7	2.2	15.8	100.0	43.8	.....	37.5	.....	18.8	.....
\$900 and under \$1,200....	20.7	.....	.....	46.0	13.8	110.0	5.2	2.7	15.8	100.0	43.9	.....	34.6	.....	21.5	.....
\$1,200 and under \$1,500....	29.2	.....	.....	43.5	14.9	115.4	4.4	3.7	17.0	100.0	58.9	.....	21.9	.....	19.2	.....
\$1,500 and under \$1,800....	22.2	.....	.....	40.9	17.5	114.1	5.4	3.1	19.1	100.0	68.7	.....	19.1	.....	12.2	.....
\$1,800 and under \$2,100....	12.7	.....	.....	41.1	17.3	112.3	6.3	3.5	19.7	100.0	75.8	.....	10.6	.....	13.6	.....
\$2,100 and under \$2,500....	7.3	.....	.....	38.5	19.3	112.0	3.8	4.0	22.2	100.0	68.4	.....	28.9	.....	2.6	.....
\$2,500 and over.....	4.8	.....	.....	38.8	21.0	712.3	3.1	3.2	21.6	100.0	76.0	.....	24.0	.....	.....	.....
Total.....	100.0	.....	.....	42.0	16.6	\$14.3	\$4.3	3.3	18.7	100.0	61.2	.....	23.6	.....	15.3	.....

## PHILADELPHIA, PA., AND CAMDEN, N. J.

Under \$900.....	4	4.3	2.73	\$365.40	\$100.87	\$176.25	\$63.01	\$15.22	\$100.52	\$821.26	3	\$24.33	1	\$157.35	.....	\$21.09
\$900 and under \$1,200....	63	4.3	2.87	462.86	139.60	9167.46	963.16	31.71	189.50	1,032.94	41	60.66	15	95.14	7	16.82
\$1,200 and under \$1,500....	86	4.7	3.16	532.62	194.70	186.72	1074.12	57.72	283.14	1,306.06	62	81.47	21	132.87	3	26.29
\$1,500 and under \$1,800....	75	4.7	3.23	593.69	273.53	9200.94	975.66	76.92	316.60	1,535.77	62	125.03	9	103.81	4	90.90
\$1,800 and under \$2,100....	40	5.2	3.96	716.11	309.72	206.85	85.54	83.50	381.86	1,783.58	33	197.51	5	107.28	2	149.53
\$2,100 and under \$2,500....	22	6.5	4.64	832.46	372.09	230.27	87.39	91.08	478.32	2,091.61	18	253.54	4	68.97	.....	194.90
\$2,500 and over.....	11	7.2	5.71	914.42	476.39	250.36	95.16	127.23	604.31	2,527.89	11	409.42	.....	.....	.....	409.42
Total.....	301	4.9	3.42	590.27	240.11	9194.72	975.41	64.90	390.05	1,469.40	230	134.56	55	111.29	16	82.48



## PER CENT.

[illegible]

## PITTSBURGH, PA.: White families.

Under \$900.....	2	5.5	3.83	\$418.81	\$122.89	\$156.00	\$24.09	\$5.75	\$108.34	\$835.88	1	\$3.75	\$12.00	.....	.....
\$900 and under \$1,200.....	54	4.4	2.94	439.34	182.39	9147.87	9 33.68	47.11	185.21	1 036.96	38	69.20	75.45	3	30.53
\$1,200 and under \$1,500.....	81	4.8	3.07	534.98	227.58	188.33	39.23	60.24	234.79	1 285.15	57	107.61	110.14	10	56.09
\$1,500 and under \$1,800.....	58	5.2	3.54	617.49	261.51	1 297.40	149.98	81.33	326.65	1 505.84	52	145.04	117.19	3	124.01
\$1,800 and under \$2,100.....	41	6.2	4.18	620.13	316.67	1 270.28	152.60	102.96	337.50	1 693.03	38	269.11	95.00	.....	242.47
\$2,100 and under \$2,500.....	12	6.3	4.24	723.84	371.27	319.03	62.33	112.72	429.92	2 019.12	11	278.78	83.20	.....	247.78
\$2,500 and over.....	6	5.8	4.88	952.09	515.24	300.50	84.62	232.28	600.81	2 686.14	5	278.55	67.12	.....	220.94
Total.....	254	5.1	3.44	569.36	252.89	10 206.08	10 44.74	75.96	267.92	1 417.10	202	153.45	92.55	16	105.92

## PER CENT.

Under \$900.....	0.8	50.1	14.7	18.7	2.9	0.7	13.0	100.0	50.0	.....	.....	.....
\$900 and under \$1,200.....	21.3	53.5	17.3	914.0	93.2	4.7	17.5	100.0	70.4	.....	.....	5.6
\$1,200 and under \$1,500.....	31.9	41.6	17.7	14.7	3.1	4.7	18.3	100.0	70.4	.....	.....	12.3
\$1,500 and under \$1,800.....	22.8	41.0	17.4	133.8	13.3	5.6	19.0	100.0	89.7	.....	.....	5.2
\$1,800 and under \$2,100.....	16.1	36.6	18.1	116.0	13.1	6.1	13.8	100.0	92.7	.....	.....	.....
\$2,100 and under \$2,500.....	4.7	35.8	18.4	15.8	3.1	5.6	21.3	100.0	91.7	.....	.....	.....
\$2,500 and over.....	2.4	35.5	19.2	11.2	3.2	8.6	22.4	100.0	83.3	.....	.....	.....
Total.....	100.0	40.2	17.8	1014.5	103.2	3.4	18.9	100.0	79.5	.....	.....	6.3

a Not including 1 family in which rent is combined with fuel and light.

## 2 Deficit.

Not including 11 families in which rent is combined with fuel and light.

<sup>4</sup> Not including 34 families in which rent is combined with fuel and light.

<sup>c</sup> Not including 25 families in which rent is combined with fuel and light.

<sup>c</sup> Not including 23 families in which rent is combined with fuel and light.

<sup>7</sup> Not including 5 families in which rent is combined with fuel and light.

<sup>a</sup> Not including 110 families in which rent is combined with fuel and light.

<sup>9</sup> Not including 2 families in which rent is combined with fuel and light.

<sup>10</sup> Not including 4 families in which rent is combined with fuel and light.

\* Not including 8 families in which rent is combined with fuel and light.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS—Continued.

PITTSBURGH, PA.: Colored Families.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Average sur-plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—	Average amount.	Families having—	Average amount.	
Under \$900.....	5	3.8	2.82	\$355.65	\$95.82	\$139.20	\$27.55	\$7.87	\$138.40	\$764.49	2	\$75.00	.....	.....	3
\$900 and under \$1,200.....	17	4.4	3.11	430.53	152.87	167.75	134.44	43.98	181.52	1,024.76	13	64.30	.....	\$52.30	1
\$1,200 and under \$1,500.....	20	5.0	3.05	461.23	220.98	1214.53	145.98	71.20	231.60	1,243.53	15	105.48	2	25.41	3
\$1,500 and under \$1,800.....	6	4.8	3.51	564.38	291.00	279.92	58.24	96.88	234.68	1,525.09	5	193.67	1	132.11	139.38
\$1,800 and under \$2,100.....	1	5.0	3.90	657.82	156.52	264.00	53.35	56.85	239.41	1,427.95	1	376.00	.....	.....	376.00
\$2,100 and under \$2,500.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$2,500 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	49	4.7	3.12	456.45	191.84	2 199.99	2 41.81	60.19	205.25	1,156.99	36	108.68	6	56.64	72.91

PER CENT.

Under \$900.....	10.2	.....	.....	46.5	12.5	18.2	3.6	1.0	18.1	100.0	40.0	.....	.....	.....	.....
\$900 and under \$1,200.....	34.7	.....	.....	42.0	14.9	16.3	13.3	4.9	17.7	100.0	76.5	.....	17.6	.....	60.0
\$1,200 and under \$1,500.....	40.8	.....	.....	37.1	17.8	17.1	13.7	5.7	18.6	100.0	75.0	.....	10.0	.....	5.9
\$1,500 and under \$1,800.....	12.2	.....	.....	37.0	19.1	18.4	3.8	6.4	15.4	100.0	83.3	.....	16.7	.....	15.0
\$1,800 and under \$2,100.....	2.0	.....	.....	46.1	11.0	18.5	3.7	4.0	16.8	100.0	100.0	.....	.....	.....	.....
\$2,100 and under \$2,500.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
\$2,500 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	100.0	.....	.....	39.5	16.6	2 17.2	2 3.6	5.2	17.7	100.0	73.5	.....	12.2	.....	14.3

PORTLAND, ME.

Under \$900.....	2	5.0	2.53	\$391.72	\$86.22	\$135.00	\$79.75	\$6.92	\$120.14	\$819.75	.....	.....	1	\$46.50	1
\$900 and under \$1,200.....	25	4.4	2.98	477.22	179.11	164.16	172.43	49.42	193.30	1,139.23	11	\$54.30	10	127.56	3 27.13
\$1,200 and under \$1,500.....	38	4.6	3.24	533.06	197.03	169.22	88.17	53.06	241.52	1,282.06	29	82.79	5	256.65	3 10
\$1,500 and under \$1,800.....	14	4.9	3.14	596.17	253.34	193.20	95.92	70.71	286.13	1,495.46	13	149.07	1	130.11	128.13
\$1,800 and under \$2,100.....	9	5.6	4.01	735.48	380.82	173.42	102.69	64.84	319.98	1,777.25	8	169.42	1	100.00	139.48
\$2,100 and under \$2,500.....	8	6.0	4.80	869.70	501.18	218.25	133.60	78.09	431.99	2,532.81	6	102.97	2	74.22	18.77
\$2,500 and over.....	1	10.0	6.85	1,538.75	680.71	165.00	91.51	113.48	813.80	3,412.25	.....	.....	1	16.25	3 16.25
Total.....	97	4.9	3.58	681.77	245.41	147.18	100.40	57.50	261.92	1 412.84	67	103.12	21	142.86	40.80

[illegible]

## PROVIDENCE, R. I.

Under \$900.	5	3.6	2.84	\$376.27	\$88.95	\$135.06	\$53.99	\$23.03	\$164.95	\$842.25	1	\$23.00	4	\$76.25	.....	3 \$56.40
\$900 and under \$1,200.....	49	5.1	3.26	487.02	145.90	144.57	69.93	43.10	188.72	1,079.24	22	33.40	25	85.63	.....	2 828.69
\$1,200 and under \$1,500.....	50	4.8	3.33	529.83	211.87	179.74	80.45	55.31	238.72	1,293.91	38	77.45	8	156.55	.....	4 332.82
\$1,500 and under \$1,800.....	28	5.6	3.84	636.55	273.22	173.65	182.89	61.10	288.93	1,522.51	4	125.82	4	71.43	.....	3 84.16
\$1,800 and under \$2,100.....	9	5.9	4.69	698.42	337.81	151.33	341.69	50.95	425.35	1,748.46	8	192.53	1	9.18	.....	1 170.11
\$2,100 and under \$2,500.....	10	6.4	5.48	864.84	466.70	197.20	405.37	96.40	418.20	2,148.71	9	109.29	.....	.....	.....	1 98.37
\$2,500 and over.....	7	8.7	7.05	1,094.67	575.55	294.14	107.84	99.80	513.55	2,625.55	7	131.65	.....	.....	.....	1 131.65
Total.....	158	5.3	3.76	584.73	239.52	1,066.86	179.79	56.38	265.27	1,393.18	106	92.35	42	95.07	10	35.68

	PER CENT.									
Under \$900.....	3.2	44.7	10.6	16.0	6.4	2.7	19.6	100.0	20.0	80.0
\$900 and under \$1,200.....	31.0	45.1	13.5	13.4	6.5	4.0	17.5	100.0	44.9	55.0
\$1,200 and under \$1,500.....	31.6	40.9	16.3	13.9	6.2	4.3	18.4	100.0	76.0	24.0
\$1,500 and under \$1,800.....	17.7	41.8	17.9	11.4	15.5	4.2	19.0	100.0	75.0	25.0
\$1,800 and under \$2,100.....	5.7	38.2	21.0	8.7	4.8	2.9	24.3	100.0	88.9	11.1
\$2,100 and under \$2,500.....	6.3	40.2	21.7	9.2	4.9	4.5	19.5	100.0	90.0	10.0
\$2,500 and over.....	4.4	41.7	21.9	7.8	4.1	3.8	20.7	100.0	100.0	0.0
Total.....	100.0	42.0	17.2	12.0	15.7	4.0	19.0	100.0	67.1	32.9

<sup>†</sup> Not including 1 family in which rent is combined with fuel and light.

<sup>a</sup> Not including 2 families in which rent is combined with fuel and light.

3 Deficit.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS—Continued.

## RUTLAND, VT.

Income group.	Num-ber of fam-ilies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average sur- plus for group.
		Total.	Equiva- lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur- nishings.	Miscel- laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	1	3.0	2.05	\$341.22	\$117.05	\$120.00	\$71.90	\$77.76	\$75.07	\$803.00	.....	.....	.....	.....	1	.....
\$900 and under \$1,200.....	30	4.7	3.09	452.36	156.69	145.53	81.77	39.96	196.29	1,072.60	18	\$72.82	9	\$72.34	3	\$21.99
\$1,200 and under \$1,500.....	31	4.7	3.44	501.40	198.50	169.84	94.53	39.82	242.39	1,246.47	25	108.76	6	107.02	.....	67.00
\$1,500 and under \$1,800.....	7	7.0	5.34	692.12	226.14	139.71	80.76	46.87	241.79	1,427.41	6	248.66	1	15.00	.....	211.00
\$1,800 and under \$2,100.....	8	5.5	4.15	637.51	303.48	166.81	104.14	101.47	335.32	1,648.72	7	258.35	1	20.00	.....	223.56
\$2,100 and under \$2,500.....	3	8.3	6.53	881.46	419.98	185.77	110.54	116.53	399.17	2,113.46	2	323.09	1	33.50	.....	204.23
\$2,500 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	80	5.1	3.64	526.56	203.03	157.76	89.82	50.00	258.13	1,264.29	58	137.52	18	75.65	4	82.98

## PER CENT.

Income group.	Num-ber of fam-ilies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average sur- plus for group.
		Total.	Equiva- lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur- nishings.	Miscel- laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	1.3	.....	.....	42.5	14.6	14.9	9.0	9.7	9.3	100.0	.....	.....	.....	.....	.....	.....
\$900 and under \$1,200.....	37.5	.....	.....	42.2	14.6	13.6	7.6	3.7	18.3	100.0	60.0	.....	30.0	.....	100.0	.....
\$1,200 and under \$1,500.....	38.8	.....	.....	40.2	15.9	13.6	7.6	3.2	19.4	100.0	80.6	.....	19.4	.....	10.0	.....
\$1,500 and under \$1,800.....	8.8	.....	.....	48.5	15.8	9.8	5.7	3.3	16.9	100.0	85.7	.....	14.3	.....	.....	.....
\$1,800 and under \$2,100.....	10.0	.....	.....	38.7	18.4	10.1	6.3	6.2	20.3	100.0	87.5	.....	12.5	.....	.....	.....
\$2,100 and under \$2,500.....	3.8	.....	.....	41.7	19.9	8.8	5.2	6.5	18.9	100.0	66.7	.....	33.3	.....	.....	.....
\$2,500 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	100.0	.....	.....	41.6	16.1	12.5	7.1	4.0	18.8	100.0	72.5	.....	22.5	.....	5.0	.....

## SCRANTON, PA.

Income group.	Num-ber of fam-ilies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Average sur- plus for group.
		Total.	Equiva- lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur- nishings.	Miscel- laneous.		Families having—	Average amount.	Families having—	Average amount.		
Under \$900.....	5	3.8	2.49	\$365.68	\$106.54	\$134.00	\$58.19	\$26.17	\$161.55	\$852.13	2	\$65.64	2	\$87.56	1	\$8.77
\$900 and under \$1,200.....	35	4.5	3.27	436.42	183.23	141.89	60.31	54.69	200.72	1,077.26	24	62.69	9	103.62	2	16.34
\$1,200 and under \$1,500.....	62	4.6	3.29	548.54	231.36	138.75	60.44	60.31	227.20	1,266.59	54	108.26	7	128.28	1	79.81
\$1,500 and under \$1,800.....	28	5.9	4.31	638.38	253.81	155.96	62.42	75.96	1,512.05	1,829.93	24	182.93	4	230.56	.....	123.86
\$1,800 and under \$2,100.....	14	7.3	5.51	829.94	354.70	162.21	72.95	307.27	1,797.03	2,080.26	11	239.95	3	52.43	0	177.30
\$2,100 and under \$2,500.....	3	6.7	5.22	798.57	309.89	174.67	84.97	194.43	517.73	2,080.26	2	234.00	.....	.....	1	156.00
\$2,500 and over.....	4	7.8	6.15	868.94	564.75	207.00	65.47	103.90	403.98	2,216.03	4	608.93	.....	.....	.....	608.93
Total.....	151	5.2	3.77	572.70	247.99	147.11	62.39	65.82	249.06	1,344.99	121	143.93	25	123.41	5	94.90



## PER CENT.

Under \$900.....	3.3	42.9	12.5	15.7	6.8	3.1	19.0	100.0	40.0	40.0	20.0
\$900 and under \$1,200.....	23.2	40.5	17.0	13.2	5.0	5.1	18.6	100.0	68.6	25.7	5.7
\$1,200 and under \$1,500.....	41.1	43.3	18.8	11.0	4.8	4.8	18.0	100.0	87.1	11.3	1.6
\$1,500 and under \$1,800.....	18.5	42.2	18.9	10.3	4.1	5.0	19.4	100.0	85.7	14.3	.....
\$1,800 and under \$2,100.....	9.3	46.2	19.7	19.1	4.1	4.1	17.1	100.0	78.6	21.4	.....
\$2,100 and under \$2,500.....	2.0	38.4	14.9	8.4	4.1	9.3	24.9	100.0	66.7	33.3	.....
\$2,500 and over.....	2.6	39.2	25.5	9.3	3.0	4.8	18.2	100.0	100.0	.....	.....
Total.....	100.0	42.6	18.4	110.9	44.6	4.9	18.5	100.0	80.1	16.6	3.3

## SYRACUSE, N. Y.

	1	4.0	3.05	\$301.61	\$158.81	\$240.00	\$58.40	\$15.50	\$56.68	\$831.00	.....	1	\$24.00	\$24.00
Under \$900.....	158	4.9	3.54	542.87	236.88	1209.61	182.59	56.11	278.42	1,407.03	110	39	91.29	54.69
\$900 and under \$1,200.....	35	4.3	3.10	436.46	158.86	176.14	66.05	43.24	180.60	1,051.35	23	9	74.34	26.07
\$1,200 and under \$1,500.....	69	4.9	3.38	528.43	213.47	198.82	184.66	53.97	238.43	1,319.17	44	19	93.84	16.09
\$1,500 and under \$1,800.....	31	5.1	3.73	580.67	202.52	217.91	88.96	69.88	337.09	1,563.03	23	8	61.73	89.62
\$1,800 and under \$2,100.....	11	6.2	4.19	709.09	290.37	294.64	86.02	55.28	379.28	1,814.67	10	1	436.00	112.01
\$2,100 and under \$2,500.....	5	5.8	3.61	598.50	401.71	502.40	91.09	96.50	580.35	2,079.55	5		205.38	205.38
\$2,500 and over.....	6	6.5	5.88	792.56	606.43	246.00	113.29	117.64	598.58	2,474.39	5	1	94.20	260.67
Total.....	158	4.9	3.54	542.87	236.88	1209.61	182.59	56.11	278.42	1,407.03	110	39	91.29	54.69

## PER CENT.

[illegible]

<sup>a</sup>Not including one family in which rent is combined with fuel and light.

AVERAGE AMOUNT AND PER CENT OF EXPENDITURE PER ANNUM FOR THE PRINCIPAL GROUPS OF ITEMS OF COST OF LIVING OF FAMILIES IN SPECIFIED INDUSTRIAL CENTERS, BY CITIES AND BY INCOME GROUPS—Concluded.

## TRENTON, N. J.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Aver-age sur-plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—amount.	Average amount.				
Under \$900.....	11	4.2	2.94	\$556.52	\$169.04	\$172.82	\$69.90	\$44.81	\$180.75	\$1,092.98	6	\$22.29	2	\$85.30	3	1 \$3.35
\$900 and under \$1,200.....	50	4.4	3.06	524.13	214.10	219.86	79.67	60.41	224.45	1,293.95	36	104.10	10	75.51	4	59.85
\$1,200 and under \$1,500.....	22	4.5	3.27	562.26	301.67	204.67	88.30	80.58	258.22	1,495.70	20	146.70	1	135.36	1	127.21
\$1,500 and under \$1,800.....	9	4.2	2.96	592.28	350.82	242.96	90.68	109.27	420.96	1,806.97	8	165.14	1	89.09	.....	136.90
\$1,800 and under \$2,100.....	5	4.4	3.44	585.71	383.54	227.20	99.82	98.17	331.00	1,725.43	5	591.97	.....	.....	.....	591.97
\$2,100 and under \$2,500.....	3	6.3	4.97	859.32	546.58	264.00	92.09	91.59	555.00	2,411.58	2	716.15	1	43.80	.....	462.83
\$2,500 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	100	4.4	3.16	544.35	259.16	2203.19	282.80	70.44	260.00	1,418.50	77	162.71	15	79.60	8	113.35

## PER CENT.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Aver-age sur-plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—amount.	Average amount.				
Under \$900.....	11	4.2	2.94	556.52	169.04	172.82	69.90	44.81	180.75	1,092.98	6	22.29	2	85.30	3	3.35
\$900 and under \$1,200.....	50	4.4	3.06	524.13	214.10	219.86	79.67	60.41	224.45	1,293.95	36	104.10	10	75.51	4	59.85
\$1,200 and under \$1,500.....	22	4.5	3.27	562.26	301.67	204.67	88.30	80.58	258.22	1,495.70	20	146.70	1	135.36	1	127.21
\$1,500 and under \$1,800.....	9	4.2	2.96	592.28	350.82	242.96	90.68	109.27	420.96	1,806.97	8	165.14	1	89.09	.....	136.90
\$1,800 and under \$2,100.....	5	4.4	3.44	585.71	383.54	227.20	99.82	98.17	331.00	1,725.43	5	591.97	.....	.....	.....	591.97
\$2,100 and under \$2,500.....	3	6.3	4.97	859.32	546.58	264.00	92.09	91.59	555.00	2,411.58	2	716.15	1	43.80	.....	462.83
\$2,500 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	100	4.4	3.16	544.35	259.16	2203.19	282.80	70.44	260.00	1,418.50	77	162.71	15	79.60	8	113.35

[1390]

## WESTFIELD, MASS.

Income group.	Num-ber of fami-lies.	Average persons in family.		Average yearly expenses per family for—						Total average yearly expenses per family.	Surplus.		Deficit.		Families having neither surplus nor deficit.	Aver-age sur-plus for group.
		Total.	Equiva-lent adult males.	Food.	Clothing.	Rent.	Fuel and light.	Furniture and fur-nishings.	Miscel-laneous.		Families having—amount.	Average amount.				
Under \$900.....	1	5.0	4.45	\$380.85	\$132.00	\$120.00	\$63.60	\$28.40	\$188.75	\$913.60	7	\$29.70	1	\$29.00	.....	1 \$29.00
\$900 and under \$1,200.....	18	5.1	3.26	527.30	218.90	140.19	72.18	43.64	225.25	1,227.46	19	144.77	10	244.90	1	1124.51
\$1,200 and under \$1,500.....	29	4.5	3.01	528.32	209.24	217.52	86.58	59.18	277.81	1,332.84	9	163.18	9	300.89	1	1.48
\$1,500 and under \$1,800.....	14	5.1	3.52	612.11	262.63	182.82	96.22	78.72	286.08	1,518.57	9	163.18	3	35.17	2	97.37
\$1,800 and under \$2,100.....	5	6.6	5.65	851.14	370.08	236.40	127.25	61.15	389.30	2,035.32	2	132.01	3	268.83	.....	1108.50
\$2,100 and under \$2,500.....	3	6.7	5.99	802.86	450.24	180.00	104.03	165.29	388.35	2,097.77	3	335.94	.....	.....	.....	335.94
\$2,500 and over.....	4	8.3	6.14	945.62	745.37	256.25	131.58	131.05	594.06	2,806.93	4	256.67	.....	.....	.....	256.67
Total.....	74	5.2	3.65	597.71	270.26	2171.99	290.53	67.16	294.50	1,494.84	44	152.86	26	234.54	4	8.48

## PER CENT.

Under \$900.....	1.4	13.1	7.0	3.1	20.7	100.0	.....	.....
\$900 and under \$1,200.....	24.3	14.4	5.3	3.6	18.4	100.0	.....	.....
\$1,200 and under \$1,500.....	39.2	17.8	5.3	3.6	18.4	100.0	.....	5.6
\$1,500 and under \$1,800.....	38.9	15.7	6.5	4.4	20.8	100.0	.....	3.4
\$1,800 and under \$2,100.....	6.8	17.3	6.3	5.2	18.8	100.0	.....	11.3
\$2,100 and under \$2,500.....	4.1	18.2	6.3	3.0	19.1	100.0	.....	.....
\$2,500 and over.....	5.4	8.6	5.0	7.9	18.5	100.0	.....	.....
Total.....	100.0	9.1	4.7	4.8	21.2	100.0	.....	.....
		18.1	26.6	4.5	19.7	100.0	.....	5.4

WILMINGTON, DEL.

	1	8.0	5.61	\$461.30	\$162.45	\$216.00	\$80.90	\$15.25	\$220.55	\$1,156.45		1	\$295.00		1	\$295.00
Under \$900.....	2	3.5	2.93	446.12	132.09	201.00	69.00	40.55	211.25	1,070.00	2	4	74.75	.....	1	187.18
\$900 and under \$1,200.....	25	4.2	2.86	491.78	235.65	293.50	75.40	52.05	247.01	1,295.78	21	4	74.75	.....	1	187.18
\$1,200 and under \$1,500.....	23	4.4	3.05	569.06	275.50	227.54	85.45	101.77	280.82	1,540.14	19	3	101.00	.....	1	187.18
\$1,500 and under \$1,800.....	21	4.6	2.92	572.20	340.65	241.38	92.97	173.50	316.08	1,736.78	18	3	160.67	.....	1	187.18
\$1,800 and under \$2,100.....	16	5.3	3.67	680.92	347.77	241.33	87.03	119.74	492.81	1,969.61	14	2	83.57	.....	1	187.18
\$2,100 and under \$2,500.....	10	4.7	3.71	701.01	493.11	281.40	107.86	121.64	461.86	2,166.80	9	1	20.50	.....	1	187.18
\$2,500 and over.....														.....	1	187.18
Total.....	98	4.6	3.16	577.52	309.22	2,229.20	± 86.78	107.52	330.80	1,640.50	83	14	111.90	.....	1	187.18

## PER CENT.

	1.0	14.0	18.7	7.0	1.3	19.1	100.0	100.0		
Under \$900.....	1.0	39.9	14.0	18.7	7.0	1.3	19.1	100.0		
\$900 and under \$1,200.....	2.0	38.9	12.3	18.8	6.1	3.8	19.7	100.0		
\$1,200 and under \$1,500.....	23.5	38.0	18.2	14.8	5.8	4.1	19.1	100.0		
\$1,500 and under \$1,800.....	25.5	36.9	17.9	14.8	5.5	6.6	18.2	100.0		
\$1,800 and under \$2,100.....	21.4	32.9	13.9	10.9	5.4	10.0	18.2	100.0		4.3
\$2,100 and under \$2,500.....	16.3	31.6	17.7	12.3	4.4	6.1	25.0	100.0		
\$2,500 and over.....	10.2	32.4	22.8	13.0	5.0	5.6	21.3	100.0		
Total.....	100.0	35.2	18.8	± 13.9	± 5.3	6.6	20.2	100.0	81.7	1.0

### Deficit.

<sup>2</sup> Not including 1 family in which rent is combined with fuel and light.

## PRICE CHANGES IN SHIPBUILDING CENTERS.

Continuing reports of changes in retail prices in connection with the cost of living in shipbuilding centers as given in former numbers of the MONTHLY LABOR REVIEW,<sup>1</sup> the following table shows increases during the period from 1914 to 1918, inclusive, for 18 shipbuilding centers on the Atlantic, Gulf, and Pacific coasts, and on the Great Lakes.

Taking the prices for December, 1914, as a base, the table shows the per cent of increase in December of each of the ensuing years, in prices of the various groups of items entering into the usual family budget.

PER CENT OF INCREASE IN RETAIL PRICES IN DECEMBER, 1915, 1916, 1917, AND 1918, OVER THE PRICES IN DECEMBER, 1914.

Item of expenditure.	PORTLAND, ME.				BOSTON, MASS.			
	Per cent of increase over December, 1914, in—				Per cent of increase over December, 1914, in—			
	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.
Food.....	a 1.96	18.59	49.83	87.17	a 0.33	18.03	45.76	74.15
Clothing:								
Male.....	1.09	8.98	31.45	82.27	6.06	20.95	45.31	112.79
Female.....	3.21	10.48	34.15	89.37	7.76	22.85	49.92	122.54
Total.....	2.13	9.72	32.78	85.77	6.63	21.86	47.53	117.18
Housing.....	.24	.61	2.38	2.48	a .07	.06	a .06	2.79
Fuel and light.....	.37	11.39	28.85	67.69	1.12	10.51	29.21	56.56
Furniture and furnishings.....	6.24	20.94	43.49	110.83	8.40	26.31	58.37	137.92
Miscellaneous.....	a .42	13.83	37.96	65.55	1.57	15.72	38.13	61.96
All items.....	a .42	13.83	37.96	72.38	1.57	15.72	38.13	70.59
	NEW YORK, N. Y.				PHILADELPHIA, PA.			
	Per cent of increase over December, 1914, in—				Per cent of increase over December, 1914, in—			
	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.
Food.....	1.34	16.26	55.28	85.99	0.34	18.92	54.41	83.33
Clothing:								
Male.....	4.78	20.32	51.40	126.39	3.30	16.15	54.11	119.61
Female.....	4.87	24.73	57.63	137.15	3.94	15.90	49.12	101.79
Total.....	4.82	22.31	54.21	131.25	3.60	16.03	51.33	111.16
Housing.....	a .10	a .05	2.63	6.47	a .29	a .72	2.60	8.00
Fuel and light.....	a .06	10.98	19.92	45.47	a .81	5.37	21.54	47.94
Furniture and furnishings.....	8.43	27.60	56.47	126.51	6.94	19.87	49.84	107.69
Miscellaneous.....	1.97	14.91	44.68	70.01	1.19	14.65	43.81	67.47
All items.....	1.97	14.91	44.68	78.79	1.19	14.65	43.81	75.92

a Decrease.

<sup>1</sup> MONTHLY REVIEW, March, April, June, 1918; MONTHLY LABOR REVIEW, August, September, and November, 1918.



PER CENT OF INCREASE IN RETAIL PRICES IN DECEMBER, 1915, 1916, 1917, AND 1918,  
OVER THE PRICES IN DECEMBER, 1914—Continued.

Item of expenditure.	BALTIMORE, MD.				NORFOLK, VA.			
	Per cent of increase over December, 1914, in—				Per cent of increase over December, 1914, in—			
	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.
Food.....	14.08	20.87	64.35	100.28	0.75	22.38	63.89	86.29
Clothing:								
Males.....	2.46	22.97	49.55	98.66	1.60	10.33	37.15	97.61
Females.....	3.03	25.09	54.75	117.35	.....	1.68	26.02	91.53
Total.....	2.74	24.00	52.07	107.72	.80	5.98	31.55	94.53
Housing.....	1.18	.85	2.96	13.78	.07	11.72	11.72	38.96
Fuel and light.....	.49	9.14	25.54	45.97	.....	17.03	33.30	74.62
Furniture and furnishings.....	5.59	26.38	60.79	122.34	.62	8.73	38.96	105.51
Miscellaneous.....	1.37	18.51	51.27	78.71	.61	14.73	45.15	76.75
All items.....	1.37	18.51	51.27	86.37	.61	14.73	45.15	83.73
SAVANNAH, GA.				JACKSONVILLE, FLA.				
Food.....	10.26	17.57	50.83	61.09	10.26	17.57	50.83	96.17
Clothing:								
Male.....	.....	25.62	60.03	137.90	10.35	35.06	74.76	136.56
Female.....	1.65	22.21	52.51	128.17	10.61	32.03	68.49	123.10
Total.....	.76	24.06	56.58	135.57	10.47	33.60	71.92	130.47
Housing.....	11.44	13.04	14.32	5.90	16.87	18.15	118.65	5.89
Fuel and light.....	11.30	11.65	21.11	37.50	.....	2.30	15.07	55.19
Furniture and furnishings.....	1.84	12.75	50.67	128.61	15.13	43.42	73.73	126.47
Miscellaneous.....	1.21	14.59	42.49	68.63	1.27	14.66	41.63	60.50
All items.....	.21	14.59	42.49	68.63	1.27	14.66	41.63	79.85
MOBILE, ALA.				HOUSTON, TEX.				
Food.....	11.04	19.92	57.32	82.74	11.04	19.92	57.32	83.83
Clothing:								
Male.....	1.77	9.12	37.91	71.64	5.11	24.76	49.32	117.33
Female.....	2.35	8.82	39.72	98.74	2.13	25.34	53.85	117.23
Total.....	2.01	8.98	38.76	85.99	2.66	25.04	51.49	117.33
Housing.....	11.86	14.33	13.60	11.16	12.29	17.34	17.72	11.68
Fuel and light.....	(?)	8.76	27.11	57.11	1.85	8.28	22.70	47.16
Furniture and furnishings.....	4.07	15.29	42.76	108.34	6.12	29.62	62.31	119.93
Miscellaneous.....	1.40	13.82	43.16	72.38	1.29	16.41	44.89	67.55
All items.....	1.40	13.82	43.16	72.39	1.29	16.41	44.89	74.61
LOS ANGELES, CALIF.				SAN FRANCISCO AND OAKLAND, CALIF.				
Food.....	14.12	0.41	33.41	63.97	14.31	9.63	35.90	67.75
Clothing:								
Male.....	1.65	10.33	41.85	104.59	2.14	14.43	42.05	118.40
Female.....	3.95	18.36	48.29	113.79	2.77	14.53	45.07	99.55
Total.....	2.78	14.28	45.02	109.12	2.46	14.48	43.56	108.96
Housing.....	12.68	12.54	1.64	4.13	1.72	12.52	14.02	13.93
Fuel and light.....	.36	2.34	10.40	18.26	1.14	4.57	14.35	30.10
Furniture and furnishings.....	6.28	23.09	56.43	118.49	5.96	21.71	48.21	101.42
Miscellaneous.....	11.93	7.68	28.85	52.03	11.66	8.30	28.63	50.52
All items.....	11.93	7.68	28.85	58.88	11.66	8.30	28.63	54.33

1 Decrease.

2 No change.

PER CENT OF INCREASE IN RETAIL PRICES IN DECEMBER, 1915, 1916, 1917, AND 1918,  
OVER THE PRICES IN DECEMBER, 1914—Continued.

Items of expenditure.	PORTLAND, OREG.				SEATTLE, WASH.			
	Per cent of increase above December, 1914, in—				Per cent of increase above December, 1914, in—			
	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.	Decem- ber, 1915.	Decem- ber, 1916.	Decem- ber, 1917.	Decem- ber, 1918.
Food.....	<sup>1</sup> 3.81	9.75	42.17	73.89	<sup>1</sup> 2.75	8.46	38.65	71.14
Clothing:								
Male.....	3.44	16.75	44.30	99.54	.79	10.87	31.81	89.88
Female.....	2.60	14.71	44.47	93.52	1.55	11.72	37.93	86.21
Total.....	3.03	15.75	44.38	96.59	1.19	11.31	36.44	87.97
Housing.....	<sup>1</sup> 10.91	<sup>1</sup> 19.55	<sup>1</sup> 22.16	12.28	<sup>1</sup> 2.42	<sup>1</sup> 5.41	1.55	44.31
Fuel and light.....	1.96	3.44	20.24	30.85	1.19	2.93	23.85	51.78
Furniture and furnishings.....	2.87	18.02	54.47	109.01	8.52	27.43	52.29	141.32
Miscellaneous.....	<sup>1</sup> 3.05	6.14	31.23	57.91	<sup>1</sup> 1.02	7.40	31.08	58.19
All items.....	<sup>1</sup> 3.05	6.14	31.23	65.50	<sup>1</sup> 1.02	7.40	31.08	70.47
	CHICAGO, ILL.				DETROIT, MICH.			
Food.....	2.66	25.23	53.42	83.44	4.05	26.51	59.69	86.82
Clothing:								
Male.....	8.51	26.53	51.01	137.06	1.70	19.35	46.91	121.66
Female.....	6.15	21.22	50.03	141.29	3.00	18.39	46.46	102.11
Total.....	7.48	24.21	50.58	138.91	2.31	18.86	46.70	111.82
Housing.....	1.08	.70	1.36	2.55	2.08	17.52	32.64	39.01
Fuel and light.....	1.93	6.64	19.34	37.06	1.62	9.94	30.20	47.56
Furniture and furnishings.....	5.91	19.96	47.45	108.89	8.73	24.50	50.40	107.01
Miscellaneous.....	3.01	19.51	41.78	58.72	3.51	22.25	49.85	72.58
All items.....	3.01	19.51	41.78	74.14	3.51	22.25	49.85	79.89
	CLEVELAND, OHIO.				BUFFALO, N. Y.			
Food.....	1.43	26.43	54.33	82.85	2.44	30.09	64.07	91.65
Clothing:								
Male.....	1.60	17.43	42.85	102.73	9.11	31.01	59.27	127.94
Female.....	2.36	18.57	44.65	102.38	8.76	27.92	57.54	117.51
Total.....	1.96	17.97	43.71	102.56	8.95	29.58	58.47	123.11
Housing.....	.12	.92	11.29	16.49	1.15	4.70	9.35	26.72
Fuel and light.....	.30	10.04	26.80	51.94	1.30	9.30	23.46	49.34
Furniture and furnishings.....	4.72	19.67	47.84	102.44	7.05	24.13	50.15	106.39
Miscellaneous.....	1.42	19.10	42.93	67.07	3.53	24.38	51.13	75.06
All items.....	1.42	19.10	42.93	72.50	3.53	24.38	51.13	82.24

<sup>1</sup> Decrease.

## INCREASE IN COST OF LIVING IN GREAT BRITAIN.

BY PROF. WILLIAM F. OGBURN.

The results of the investigation of the Working Classes Cost of Living Committee<sup>1</sup> for Great Britain appointed by the Chancellor of the Exchequer have been published, showing the increase in the cost of living from July, 1914, to June, 1918. The most general statement of their conclusions is that the cost of living has increased over this period 74 per cent. Allowing for roughness and approximation, this increase in the cost of living is placed at not more than 80 per cent nor less than 68 per cent. Broken up into classes of expenditure the increases have been, for food, 90 per cent; for fuel and light, 79 per cent; for rent, 2.5 per cent; for fares, 20 per cent; for clothing, 95 per cent; for cleaning materials, matches, candles, etc., 114 per cent; and for insurance, no increase.

The figures for the increase in the cost of living in the United States are not strictly comparable with these British figures, as will be shown in the following paragraphs. Broken up into classes of expenditure the following increases occurred over this period: Food, 60 per cent; clothing, 82 per cent; fuel and light, 39 per cent; furniture, 92 per cent; and rent, 11 per cent.

A comparison of the American estimates with the British estimates indicate that by June, 1918, the cost of living had risen somewhat more in Great Britain than in the United States, and that with the exception of rent the greater increase was true of all classes of expenditure. The lower housing figure in Great Britain may be due to the fact that there was legal prohibition against raising rents, except as taxes were increased. In comparing these two rates of increase in the two countries it is well to remember that perhaps the increase in the cost of living started earlier in Great Britain than in America. It is also to be noted that transportation and insurance are included in the British estimate and not in the American, and that the British figures are from July, 1914, while the American figures are from January, 1914. The most probable basis of incomparability lies in the fact that the American figures represent the cost of living as measured by the increase in prices, weighted according to their importance in the family budget, whereas the British figures not only represent the change in prices but include also a second factor, namely, the change in the nature of the standard of living. The American figures were determined by pricing a list of commodities in 1914 and again in 1918, and by computing a weighted average

<sup>1</sup> Great Britain. Working Classes Cost of Living Committee, 1918. London, 1918. 28 pp. Cd. 8980. Price, 3d.

per cent increase. The British report presents a working-class cost-of-living budget in 1914 and another working-class cost-of-living budget in 1918. A percentage increase of the 1918 budget over the 1914 budget is computed, the significant fact being that the budget in 1918 does not include the same class of commodities nor the same amount of consumption of particular commodities as does the 1914 budget. In other words, in Great Britain the war has changed substantially, over the four-year period, the nature of the standard of living. Less butter, sugar, eggs, and cheese are consumed and more margarine, cereals, and potatoes. Similarly, there has been a distinct change in the quality of clothing. The British figures for the cost of living therefore represent two things: One, the change in price level; the other, the change in the quality of the standard of living. The American figures represent only one thing, the change in price, and no attempt is made to show the change in the cost of living as measured by the change in the quality of the standard of living. Although analysis shows that the British figures measure two aspects of the change in the cost of living and that the American figures measure only one aspect, the resultant average figures of increase are fairly comparable as a measure of the cost of living because in the United States it is probable that the change in the quality of the standard of living over this time has been very slight.

The British report therefore should be of special interest to American readers in that it attempts to measure the amount of substitution of one article for another that has taken place during this era of rising prices. The change in the quality of the standard of living may be due partly to the efforts of the working classes to meet the mounting prices but is probably largely due to the fact that the prewar commodities could not be purchased on the market and the population was forced to take substitutes. Of particular interest is the change in the standard of living in regard to food. The change in the prices of food in Great Britain as measured by the prices of exactly the same budget in 1914 as in 1918 is, according to the figures of the Ministry of Labor, an increase of 118 per cent, whereas if the same prices of the Ministry of Labor are applied to the 1914 budget and to a budget in 1918 based upon the changes and substitutes in foodstuffs, the increase in the cost of food is only 90 per cent. In other words, if the family had continued to purchase the same kind of food in 1918 that it purchased in 1914 it would have had to pay 118 per cent more, but by the use of substitutes it had to pay only 90 per cent more. The nature of this substitution is shown in detail in the tables.

A comparison of the quality of food consumed by the average working-class family in 1918 and in 1914 shows that there has been a falling off of about 3 per cent in calories. However, the standard of



the unskilled class was slightly raised; that is, about 3 per cent more calories were consumed per man per day. That of the semiskilled class fell only slightly while the consumption of the skilled class fell about 180 calories per man per day. The report makes no attempt to state whether the proteins and various other chemical constituents have been perceptibly changed or whether the dietary was less well balanced in 1918 than in 1914. It is recalled that the rationed articles were sugar, butter, margarine, meat, bacon, and tea.

In regard to the change in the standard of clothing, the committee observes that there has been a marked deterioration in the quality of clothing; that is, a particular "grade" in 1918 is inferior in one respect or another to the corresponding grade in 1914. On the other hand, the statement is made that there was a marked tendency to purchase better qualities in 1918 than in 1914, so that these two opposing forces tended somewhat to balance one another. So marked has been this latter tendency that many of the lowest 1914 grades have practically disappeared from the market through lack of demand. All-wool garments, which are stated to have predominated in 1914, were difficult to obtain in 1918, having been replaced by mixed wool and cotton. Inferiority is estimated at from 10 per cent to 30 per cent, the inferiority usually being in respect to weaving, make, and finish. It is also of interest to observe that in the opinion of many of the firms dealing in clothing the introduction of standard suits has resulted in an improvement in quality. The deterioration in underclothing seems not to be particularly marked, but a decided deterioration appears in hosiery. The quality of shoes in 1918 is hardly inferior to that of shoes in 1914, although the repairing is said to be markedly inferior. The change in the nature of the standard of living seems to be more noticeable in food and clothing than in fuel, light, insurance, and other general classes of expenditure.

A consideration of classes of expenditure other than food and clothing shows that there has been no change in the price of insurance. The only increase in rents has been, according to governmental regulation, in local taxes, which the committee estimates to be on the average about 2d. (4 cents) per week.

The report says nothing about the deterioration in the value of the houses. In all probability little or no repairing has been done on houses and there has doubtless been some deterioration. Twenty-five towns out of forty-three investigated had not increased tram and railway fares. The increases in the remaining 18 had been relatively insignificant, never exceeding one-half pence per mile. The increase in minor household necessities is measured only for cleaning materials, firewood, matches, candles, and paraffin.

American readers will be interested not only in the percentage increases in the cost of living, but also in the British budgets, one

for 1914 and one for 1918, shown in the accompanying tables. These budgets are general working-class budgets and represent an average of the skilled, the unskilled, and the semiskilled classes. The size of the family is 4.57 equivalent adult males as measured by the Inter-Allied Scientific Food Commission, which recommends the following measurements:

Male, over 14 years.....	1.00
Female, over 14 years.....	.83
Children, 10 to 14 years.....	.83
Children, 6 to 10 years.....	.70
Children, under 6 years.....	.50

AVERAGE WEEKLY EXPENDITURE OF AN URBAN WORKING-CLASS FAMILY OF  
4.57 EQUIVALENT ADULT MALES IN GREAT BRITAIN, JULY, 1914, AND JUNE, 1918.

GENERAL EXPENDITURES.

Class of expenditure.	Average weekly expenditure.	
	July, 1914.	June, 1918.
Food.....	\$6.06	\$11.50
Sundries.....	.28	.61
Fuel and light.....	.57	1.01
Rent.....	1.60	1.64
Fares.....	.20	.24
Insurance.....	.73	.73
Clothing.....	1.34	2.62
Total.....	10.79	18.35

EXPENDITURES FOR FOOD.

Article.	July, 1914.		June, 1918.	
	Quantity.	Cost.	Quantity.	Cost.
	<i>Pounds.</i>		<i>Pounds.</i>	
Bread and flour.....	33.50	\$1.02	34.50	\$1.05
Biscuits, cake.....		.11		.26
Meat sold by weight, and sausages.....	6.80	1.19	4.40	1.06
Bacon.....	1.20	.28	2.55	1.35
Other meat and fish.....		.25		.64
Lard, suet, etc.....	1.00	.15	.78	.28
Eggs (number).....	13.00	.26	9.10	.74
Fresh milk (pints).....	9.20	.33	11.70	.72
Condensed milk.....		.03		.17
Cheese.....	.84	.15	.41	.17
Butter.....	1.70	.50	.79	.48
Margarine.....	.42	.05	.91	.22
Potatoes.....	15.60	.22	20.00	.51
Vegetables.....		.14		.26
Fruit (fresh).....		.10		.09
Rice and tapioca.....	1.40	.09	1.30	.15
Oatmeal.....	1.30	.05	1.40	.12
Tea.....	.68	.29	.57	.39
Coffee.....	.09	.03	.12	.06
Cocoa.....	.18	.07	.23	.15
Sugar.....	5.90	.26	2.83	.41
Jam.....		.10		.33
Sirup.....		.02		.14
Pickles.....		.02		.05
Other food.....		.19		.29
Meals out.....		.12		.18
Total.....		6.06		11.50

**AVERAGE WEEKLY EXPENDITURE OF AN URBAN WORKING-CLASS FAMILY OF 4.57 EQUIVALENT ADULT MALES IN GREAT BRITAIN, JULY, 1914, AND JUNE, 1918—Concluded.**

**EXPENDITURES FOR CLOTHING.**

Article.	Price per article.		Weight.
	July, 1914.	June, 1918.	
MEN.			
Suits.....	\$6.93	\$14.60	34
Overcoats.....	6.65	11.36	23
Shirts (union flannel).....	1.10	2.00	6
Underwear (union).....	.71	1.32	5
Hosiery (union).....	.20	.51	3
Boots (working).....	2.64	5.25	16
Boots (lighter).....	3.12	6.53	
Boots (repairs).....	.81	1.44	7
Hats.....	.73	1.50	3
Caps.....	.34	.63	1
Collars.....	.10	.14	2
WOMEN.			
Costumes.....	10.71	19.53	30
Dresses.....	1.95	3.87	13
Underwear.....	.77	1.46	15
Corsets.....	.97	1.68	2
Hats.....	2.58	4.66	15
Stockings.....	.41	.89	4
Aprons.....	.32	.55	3
Boots.....	2.80	5.43	14
Shoes.....	2.31	5.29	
Boots (repairs).....	.51	.93	4
BOYS OF SCHOOL AGE.			
Suits.....	3.83	8.54	23
Shirts.....	.61	.97	8
Underwear.....	.59	1.05	6
Stockings.....	.39	.75	6
Collars.....	.10	.14	2
Caps.....	.22	.47	2
Overcoats.....	3.26	7.64	23
Boots.....	1.68	3.06	23
Boots (repairs).....	.57	1.07	7
GIRLS OF SCHOOL AGE.			
Dresses.....	4.42	8.17	27
Underwear.....	.87	1.54	18
Stockings.....	.41	.89	5
Hats.....	.61	1.16	14
Boots.....	1.76	3.57	28
Boots (repairs).....	.47	.89	8
YOUNG CHILDREN.			
Frocks.....	1.05	2.01	19
Pinafores.....	.45	.81	19
Underwear.....	.26	.63	23
Socks.....	.18	.45	4
Shoes.....	.73	1.12	35

The preceding paragraphs present the most interesting conclusions of this report, and in the remaining paragraphs a few comments will be made on the method of investigation.

The data for 1918 come largely from questionnaires. Ten thousand of these were sent out in reasonable proportions to various sections of England, Scotland, and Wales, and 1,400 were returned, but none were collected from Ireland and none from the rural districts. Of those that were returned only 66 budgets were thrown out as being defective. At first glance this would seem to be rather too

small a percentage to discard, but of course the questionnaires may have been unusually well filled out. The forms for the collection of budgets were distributed through the assistance of voluntary services of the trade-unions, cooperative societies, medical officers of health, and others. The American experience in general in the collection of budgetary material has been such as to give very little confidence to the "questionnaire method." Several attempts along this line have been more or less disastrous, particularly when the attempt has been made to collect statistics through voluntary services. While in general this criticism seems sound, an examination of the form schedules used by this Working Class Cost of Living Committee as compared with schedules sent out in American inquiries shows that the specific or particular liability to error in this British survey is not as great as would be supposed. The schedule, which is all on one sheet, is accompanied by a page of instructions on another sheet. Food, fuel and light, rent, insurance, tram fares, and cleaning materials are the items of information requested. The prices and quantities of about 40 foodstuffs are asked for. The occupation, but not the wage, is requested, and only the ages of children under 18 are required. The food expenditures are for only one week, and if tabulated at all will be fairly accurate, the greatest source of error being the supplies on hand at the beginning of the week and at the close of the week. But no doubt the negative and positive errors will tend to balance and reduce the error here. This method of collecting food data is employed by the United States Department of Agriculture and usually by the schools of home economics, with the additional precaution, however, that paid investigators check up and supervise the tabulation. The form shows that the amount of coal is based upon the average estimate for the recent weeks. By omitting from the schedules clothing and sundries the questionnaire method has been made possible. Quantities and prices of clothing were obtained from firms, particularly the cooperative stores.

One of the most difficult problems in connection with the survey was to get the budgetary material for 1914, there being no available budgets for that year. The Board of Trade had made a budgetary study of food in 1904, which the committee brought up to the date July, 1914. This could be done because the change in prices of various articles between 1904 and 1914 had been collected and also because it was possible to make some estimates of the change in the nature of the commodities consumed in 1914 as contrasted with 1904, from various sources, particularly the statistical abstracts of the United Kingdom on the consumption per head of population of various foodstuffs. As the changes in prices were slight, as was also the change in the standard of living, the quantity and price expenditure



in 1914 were approximated on the basis of the 1904 figures. In order to make the 1914 figures comparable with the June, 1918, figures, since they are based upon weekly estimates, the 1914 figures should be adjusted to a summer month, which it is presumed the committee did.

Through the assistance of the cooperative societies and various clothing establishments the clothing budget for 1914 was derived by working back from 1918. The same method was followed in securing the estimates for fares, gas, coal, and insurance. As previously stated, the rent item was assumed to be the same in both budgetary periods. It was thus possible to reconstruct a budget for 1914 to compare with that of 1918. Another difficulty in the problem lay in the fact that the 1904 budgetary studies were classed on the basis of income, whereas in collecting the 1918 figures it was thought inadvisable to ask the wages, so the classification in 1918 was made on the basis of skilled, semiskilled, and unskilled classes. It is somewhat difficult to classify occupations according to these classes because of the fact that there is usually a large number of border line or doubtful cases. It is somewhat more accurate to throw out the border line and doubtful cases than to use them, although errors in one direction may be balanced by errors in another. Apparently this committee did not throw out the doubtful cases. It should be remembered, therefore, that the comparison is of working-class budgets averaged from budgets classified according to skilled, unskilled, and semiskilled classes, and that the average is derived after weighting the different articles of consumption.

The committee also makes the classification of budgets by localities; and shows the probable error of the averages by the accepted statistical method of dividing the standard deviation by the square root of the number of cases.

Still another problem in making the comparisons valid lay in the fact that the budgets were for families of different sizes, budgets being comparable only for families of the same size. Thus the 1914 budget was for a family of 4.37 equivalent adult males and the 1918 budget for a family of 4.57 equivalent adult males and the average size of the families of skilled class was 4.5, of the semiskilled, 4.3, of the unskilled, 4.8, and of the clerks, 3.7. To make the comparisons, therefore, all families were reduced to a standard family of 4.57. This was done by increasing the items of expenditure by the same percentage of increase by which the size of the family was increased. Thus the size of the family in 1918 is 4.6 per cent greater than the size of the family in 1914. Therefore the items of expenditure in 1914 were increased 4.6 per cent in order to make them comparable with the expenditures of the family of 1918. This method of reducing the families to a standard unit may be criticised

from the theoretical point of view and while the source of error due to this procedure may be small the procedure is not to be recommended. In other words, the percentage increase in expenditure, say of food, is not the same as the percentage increase in the size of family. In fact, practical observation leads to the conclusion that as the family grows larger the percentage increase in the amount of expenditure on food is not as great as the percentage increase in the size of family. This point has been studied from American data by the United States Bureau of Labor Statistics. For instance, in New York City the relationship between size of family and percentage of expenditure for food has been found to be  $x = 41.32 + 1.128 y$  and the relationship between size of family and income  $z = 1034.3 + 115 y$ , where  $x$  equals the percentage, of the total annual expenditure, spent for food;  $y$  equals the size of the family expressed in units of the adult male; and  $z$  equals the total annual family expenditure. From the first equation we find, by substituting 4.37 for  $y$  and solving for  $x$ , that when the family is 4.37 the percentage spent for food is on the average 46.25. And from the second equation, by substituting 4.37 for  $y$  and solving for  $z$ , we find that when the family is this size the total expenditure is on the average \$1,537, and hence the total amount spent for food is \$711. Now when the family is increased to 4.57 the percentage spent for food is on the average 46.475, the total expenditure is on the average \$1,560, and hence the total amount spent for food is \$726. Thus when the family is increased from 4.37 to 4.57, or 4.6 per cent the amount spent for food is increased from \$711 to \$726 which is not 4.6 per cent but only about 2 per cent. This relationship between the increase in size of family and increase in expenditure for food as shown from New York data is also borne out by data from a number of other cities. A description of the equations is to be published in a future publication of the United States Bureau of Labor Statistics.

A correction made according to this criticism would show a slightly greater per cent of increase in the cost of living from 1914 to 1918 than the committee report shows. Corrections would also modify somewhat the findings as to the change in the calories consumed by the three classes of workers' families in 1918 as compared with 1914.

A general consideration of the method employed in the study shows that the committee has by the use of considerable ingenuity in checking made the greatest possible use of data which in their raw state are not the best imaginable. The committee has checked its various estimates from a large number of other sources all along through the survey; indeed in many ways it has been very resourceful in handling the data. Its practice is also quite admirable in the fact that it gives the reader an estimate of errors here and there

and it reports size of error where approximations and estimates are made. It is exceedingly good practice in statistical reports to furnish the reader estimates of the size of error and it is greatly to be hoped that future reports will continue this good practice.

### COST OF LIVING IN ITALY.

That the cost of living in Italy had advanced to an extraordinary point in the latter half of 1917 is indicated by a recent report from the American consul at Turin, which reveals the situation in that consular district lying in the Piedmont section of Italy. Turin, the principal city, contains about 600,000 people, being approximately the size of Milan. The consul states that the scarcity of labor, which restricted the crops, and the demands of the army further reduced the amount of foodstuffs available for civil distribution and thus contributed to the general advance in prices.

During the year the Government found it necessary to introduce the card, or coupon, system for rationing food supplies for the population. The series began with sugar and speedily embraced bread, rice, corn meal, macaroni, and olive oil. Two meatless days per week (Thursday and Friday) were introduced; the manufacture of all cakes and candy ceased; the gas supply was reduced in pressure and cut off entirely except during certain hours in the day in order to limit consumption; and war bread was not allowed to be placed on sale until 24 hours after it had been baked.

The following table indicates the increase in cost of living in the period July-December, 1917, as compared with the period, January-June, 1914.

INCREASE IN COST OF LIVING IN PERIOD JULY-DECEMBER, 1917, AS COMPARED WITH PERIOD JANUARY-JUNE, 1914, AS REPORTED BY AMERICAN CONSUL AT TURIN, ITALY.

Item.	Unit.	January to June, 1914.	July to December, 1917.	Per cent of increase.
Rent:				
Two rooms and bath, furnished, per month.		\$25.00	\$50.00	100.0
Small apartment, per month.		60.00	80.00	33.3
Six to eight room apartment, unfurnished, per month.		40.00	60.00	50.0
Eight to ten room house, unfurnished, per month.		60.00	75.00	25.0
Hard coal.	Short ton.	9.00	120.00	1,233.3
Wood.	Ton.	6.00	40.00	566.7
Shoes.	Pair.	5.00	13.00	160.0
Underwear.	Suit.	2.00	6.00	200.0
Shirts.	Each.	2.40	2.50	4.2
Suitings.	Yard.	3.00	7.00	133.3
Bread.	Pound.	.05	.07	40.0
Butter.	do.	.32	.90	181.3
Cheese.	do.	.32	.50	56.3
Eggs.	Dozen.	.30	.60	100.0
Fish, preserved.	Pound.	.30	.80	166.7
Fruit, fresh.	do.	.09	.27	200.0
Meat, fresh.	do.	.30	.80	166.7
Milk, skimmed.	Quart.	.06	.09	50.0
Potatoes.	Pound.	.02	.06	200.0
Rice.	do.	.05	.08	60.0
Sugar.	do.	.12	.35	191.7

## EMPLOYMENT AND UNEMPLOYMENT.

CONFERENCE ON NATIONAL EMPLOYMENT SERVICE, WASHINGTON,  
D. C., APRIL 23 TO 25, 1919.

Under date of April 16, 1919, the Secretary of Labor sent a letter to the governors of the several States inviting them to attend a conference to discuss the subject of a national employment service. The Federal directors of employment in the several States were also invited to the conference. The call of the Secretary of Labor addressed to the governors was as follows:

A conference will be held on April 23, 24, and 25 in Washington with the Secretary of Labor, the director general, United States Employment Service, and the representatives of the States, to discuss the subject of a National Employment Service in cooperation with States and municipalities, and to project a program for legislation.

The purpose of the conference will be to define and establish the most effective form of relationship between National and State employment activities and in general agreement bring out a definite objective toward which all may work to the end that a thorough and comprehensive public employment service may be permanently established.

In order that there may be a full discussion and the views of each State presented, you are invited to send a representative to this conference. In view of the importance of the subject and the necessity for prompt action thereon, may I urge that you designate some one to attend the conference and advise me by telegraph.

The conference will be held in the United States Employment Service Building, Nineteenth and D Streets, NW., Washington, D. C., beginning promptly at 10.30 a. m., April 23.

W. B. WILSON,  
*Secretary of Labor.*

In response to this call 60 conferees met in the offices of the United States Employment Service in Washington, D. C., for three days of strenuous work, from April 23 to 25, inclusive. The list of representatives and other conferees follows:

### CONFEREES IN ATTENDANCE.

John P. McLaughlin, State labor commissioner, representing Gov. Stephens of California.

James R. Noland, secretary of state, of Denver, Colo., representing Gov. Shoup.

W. W. Phillips, State representative, representing Gov. Catts, of Florida.

P. E. Glenn, Atlanta, Ga., representing Gov. Dorsey.

Barney Cohen, State director of labor, Springfield, Ill., representing Gov. Lowden.

Prof. F. S. Deibler, State general advisory board, representing Gov. Lowden of Illinois.



J. H. Crawford, State commissioner of labor, Topeka, Kans., representing Gov. Allen.

Lynn R. Meekins, of Baltimore, Md., representing Gov. Harrington.

Charles F. Gettemy, State commissioner of labor statistics, representing Gov. Coolidge, of Massachusetts.

Charles V. Safford, representing Gov. Pankey of New Mexico.

Bernard L. Shientag, representing Gov. Smith of New York.

Mr. Moses, New York State reconstruction committee, representing Mr. John G. Agar.

Hon. J. M. Baer, Congressman, representing Gov. Frazier, of North Dakota.

W. H. Fitzgerald, Portland, Oreg., representing Gov. Wolcott.

John D. Frost, assistant adjutant general, representing Gov. Cooper of South Carolina.

George Dixon, representing Gov. Norbeck of South Dakota.

C. R. Keilley, executive secretary, State council of defense, Richmond, Va., representing Gov. Davis.

John Hirschberg, State commissioner of labor, Richmond, Va., representing Gov. Davis.

L. L. Westfall, representing Acting Gov. Hart, of Washington.

J. L. Pauley, secretary State federation of labor, Charleston, W. Va., representing Gov. Cornwell.

Harry C. Hoffman, State commissioner of labor, representing Gov. Carey of Wyoming.

William T. Boyce, Federal director, employment service, for California.

Roady Kenehan, Federal director, employment service, for Colorado.

David Elder, acting Federal director, employment service, for Connecticut.

S. P. Doherty, Federal director, employment service, for Delaware.

\*H. M. Stanley, commissioner of commerce and labor and Federal director, employment service for Georgia, representing Gov. Dorsey.

P. L. Prentis, Federal director, employment service, for Illinois.

J. Will Kelley, Federal director, employment service, for Kansas.

\*W. Pratt Dale, Federal director, employment service, representing Gov. Black of Kentucky.

Charles S. Hichborn, Federal director, employment service, for Maine.

E. F. McGrady, assistant Federal director, employment service, for Massachusetts.

W. W. Brown, Federal director, employment service, for Missouri.

Scott Leavitt, Federal director, employment service, for Montana.

\*Col. Lewis T. Bryant, State commissioner of labor and Federal director, employment service, for New Jersey, representing Gov. Edge.

Dean George W. Kirchwey, Federal director, employment service, for New York.

Dr. George J. Ramsey, Federal director, employment service, for North Carolina.

C. H. Mayhugh, acting Federal director, employment service, for Ohio.

\*Claud E. Connally, State commissioner of labor and Federal director, employment service, for Oklahoma, representing Gov. Robertson.

Wilfred F. Smith, Federal director, employment service, for Oregon.

Harry L. Parks, acting Federal director, employment service, for Pennsylvania.

Joseph T. Ware, Federal director, employment service, for Tennessee.

H. W. Lewis, State labor commissioner and Federal director, Employment Service, for Texas.

James B. Botts, Federal director, employment service, for Virginia.

Lawrence Wood, Federal director, employment service, for Washington.

George P. Hambrecht, chairman, State Industrial Commission and Federal director, employment service, for Wisconsin.

(The delegates marked with an asterisk (\*) represent both the Employment Service and the State.)

F. C. Roberts, representing Samuel Gompers, American Federation of Labor, Washington, D. C.

E. J. Davidson, United States Chamber of Commerce, Washington, D. C.

Fred C. Croxton, formerly chief statistician, State industrial commission, and Federal director, employment service, for Ohio.

George F. Miles, chief statistician, State industrial commission of Ohio.

Jesse H. Evans, central bureau planning statistics, Washington, D. C.

Dr. Royal Meeker, commissioner, Bureau of Labor Statistics, Department of Labor, Washington, D. C.

John B. Densmore, director general, employment service.

Nathan A. Smyth, assistant director general, employment service.

William E. Hall, acting assistant director general, employment service.

Mrs. Margaretta Neale, assistant to director general for women's work, employment service.

Wade H. Skinner, director organization division, employment service.

Edward Easton, jr., assistant director, operation division, employment service.

A. D. Chiquoine, jr., director, information division, employment service.

S. W. Mason, acting director, control division, employment service.

J. L. McGrew, acting director general, employment service, and secretary of the conference.

REPRESENTATIVES DESIGNATED BUT NOT PRESENT.

J. B. Carrington, Anniston, Ala., representing Gov. Killby.

A. D. Warner, president chamber of commerce, Wilmington, Del., representing Gov. Townsend.

Hon. Key Pittman, United States Senator, representing Gov. Boyle of Nevada.

John G. Agar, chairman committee on unemployment, New York State reconstruction committee, representing Gov. Smith.

Hon. Frank R. McNinch, mayor of Charlotte, N. C., representing Gov. Bickett.

T. J. Duffy, chairman State industrial commission, representing Gov. Cox of Ohio.

George H. Auerback, member Council of Defense and chairman employment committee, representing Gov. Bamberger of Utah.

As a result of the exchange of views, a resolution was adopted just before adjournment setting forth the principles and general features which, in the judgment of the conferees, should be embodied in legislation to make permanent the United States Employment Service and maintain a national employment system. The resolution follows:

1. The United States Employment Service shall be continued as a permanent bureau in the Department of Labor. It shall be managed by a director general who shall be appointed by the President and who shall be assisted in working out standards and policies for the operation of the employment system of the Nation by an advisory board, which may also be appointed by the President. A woman assistant to the director general shall be appointed by the Secretary of Labor to have general supervision of all matters relating to the employment of women, and there shall be such other assistants and employees in the District of Columbia and elsewhere as shall be necessary to carry out the purposes of the act.

2. It shall be the province and duty of the said bureau, under the direction of the Secretary of Labor, to establish and maintain a system of employment offices in the States which do not maintain an employment service, and in States which do maintain such a service, to aid as hereinafter provided in the development thereof, and, in

addition, to coordinate the public employment offices throughout the country by furnishing information as to labor conditions by maintaining a system for clearing labor between the several States and by establishing and maintaining a uniform policy and procedure.

3. For the use of the service there shall be appropriated annually a sum of money from which a specified amount may be used by the Secretary of Labor for maintaining the offices and staff of the director general, offices for clearing labor between the States, and for inspection forces; of the balance of the appropriation, so much as shall be necessary shall be allotted among the States on the basis of their respective populations, the unexpended balance remaining after such allotment has been made to be expended in the discretion of the Secretary of Labor as shall be required where necessary to supplement the service maintained in the several States.

4. When any State has made, or shall hereafter make, an appropriation for the maintenance of a public employment service under State control, and which is maintaining or is prepared to maintain such an employment service in cooperation with the Federal Government, there shall be paid to the treasurer of such State, upon certificate by the Secretary of Labor, for the benefit of the State employment system an amount not exceeding the allotment for the State and equal to the amount which is appropriated by the State and its local subdivisions for such purpose, provided that the amount so appropriated shall not be less than 25 per cent of the allotment on the basis of population made to such State, nor less than the amount expended by such State for public employment offices in the year 1918, such payment to be conditional upon the conduct of the State employment system in accordance with uniform rules and regulations and with the standards of efficiency prescribed by the director general with the approval of the Secretary of Labor.

5. During a period of two years the Secretary of Labor shall have authority to spend so much of the sum apportioned to the States as he may deem necessary in the respective States, as follows:

(a) In States where there is no State employment service, in establishing and maintaining a system of public employment offices.

(b) In States where there is a State system of public employment offices, but which are not entitled to receive Federal funds under the provisions of paragraph 4, in maintaining a cooperative State and Federal system of public employment offices which shall be maintained by such officer or board and in such manner as may be agreed by and between the governor of the State and the Secretary of Labor.

6. That provision shall be made providing for the extension to the system of employment offices operated in conformity with the provisions of this bill and under the rules and regulations of the United States Employment Service the use of post-office and postal facilities, including the franking privilege.

The United States Employment Service is to prepare, as soon as possible, a draft of a bill embodying the principles and general features stated in the resolution for submission to the subcommittee which drafted the resolution. It is greatly to be hoped that at last a permanent national system of employment offices administered under uniform rules and standards prescribed by Federal authority will be provided for at the forthcoming extra session of Congress.

## EMPLOYMENT IN SELECTED INDUSTRIES IN MARCH, 1919.

The Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in March, 1919, from representative manufacturing establishments in 13 industries.

The figures for March of this year as compared with those from identical establishments for March, 1918, show that there was a decrease in the number of people employed in all of the industries. The largest decrease, 48.8 per cent, appears in woolen; while cotton finishing, men's ready-made clothing, and hosiery and underwear show decreases of 24.7, 22.3 and 20.4 per cent, respectively.

The reports from 8 industries show an increase in the total amount of the pay roll for March, 1919, when compared with March, 1918. Respective increases of 27.7, 22.9 and 21.1 per cent appear in car building and repairing, leather manufacturing, and automobile manufacturing. The other increases range from 5.3 per cent in cigar manufacturing to 17.6 per cent in iron and steel. Five industries show decreases. The greatest decrease, 47.7 per cent, is shown in woolen.

## COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1918, AND MARCH, 1919.

Industry.	Estab- lish- ments report- ing for March of both years.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (-).	Amount of pay roll in—		Per cent of increase (+) or decrease (-).
			March, 1918.	March, 1919.		March, 1918.	March, 1919.	
Automobile manufactur- ing.....	48	1 week..	114,793	111,228	- 3.1	\$2,717,266	\$3,291,213	+21.1
Boots and shoes.....	74	do.....	64,807	61,721	- 4.8	1,081,815	1,243,685	+15.0
Car building and repairing.....	39	1 month..	44,459	43,652	- 1.8	1,871,658	2,389,750	+27.7
Cigar manufacturing.....	55	1 week..	19,948	17,391	-12.8	269,070	283,419	+ 5.3
Men's ready-made clothing.....	35	do.....	23,408	18,191	-22.3	417,456	393,345	- 5.8
Cotton finishing.....	18	do.....	15,084	11,360	-24.7	244,357	205,205	-16.0
Cotton manufacturing.....	56	do.....	51,999	50,153	- 3.6	705,178	702,577	- 0.4
Hosiery and underwear.....	67	do.....	34,200	27,221	-20.4	437,415	377,244	-13.8
Iron and steel.....	102	1 month..	189,872	166,897	- 8.7	9,555,253	11,239,659	+17.6
Leather manufacturing.....	34	1 week..	15,040	14,714	- 2.2	264,266	324,839	+22.9
Paper making.....	56	do.....	25,985	25,729	- .9	490,887	565,825	+15.3
Silk.....	48	2 weeks..	15,648	14,761	- 5.7	440,230	509,652	+15.8
Woolen.....	49	1 week..	48,141	24,625	-48.8	806,939	421,999	-47.7

The following table shows the number of persons actually working on the last full day of the reported pay period in March, 1918, and March, 1919. The number of establishments reporting on this question is small, and this fact should be taken into consideration when studying these figures.



## COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN MARCH, 1918, AND MARCH, 1919.

Industry.	Establishments reporting for March of both years.	Period of pay roll.	Number actually working on last full day of reported pay period in March—		Per cent of increase (+) or decrease (—)
			1918	1919	
Automobile manufacturing.....	26	1 week.....	71,293	73,418	+ 3.0
Boots and shoes.....	21	do.....	12,029	10,837	— 9.9
Car building and repairing.....	38	1 month.....	38,523	39,046	+ 1.4
Cigar manufacturing.....	20	1 week.....	5,924	5,349	— 9.7
Men's ready-made clothing.....	5	do.....	10,381	9,346	—10.0
Cotton finishing.....	13	do.....	10,458	7,838	—25.0
Cotton manufacturing.....	34	do.....	24,504	24,307	— .8
Hosiery and underwear.....	24	do.....	13,403	11,081	—17.3
Iron and steel.....	76	1 month.....	141,929	132,574	— 6.6
Leather manufacturing.....	18	1 week.....	10,835	10,750	— .8
Paper making.....	21	do.....	7,891	8,067	+ 2.2
Silk.....	24	2 weeks.....	8,539	7,818	— 8.1
Woolen.....	39	1 week.....	36,848	15,211	—58.7

The figures in the next table show that in 8 industries there were more persons on the pay roll in March, 1919, than in February, 1919. An increase of 31.2 per cent in woolen is the greatest increase shown, while the largest decrease, 2.7 per cent, appears in iron and steel.

## COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY AND MARCH, 1919.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (—).	Amount of pay roll in—		Per cent of increase (+) or decrease (—).
			February, 1919.	March, 1919.		February, 1919.	March, 1919.	
Automobile manufacturing	47	1 week..	108,236	111,030	+ 2.6	\$3,231,080	\$3,284,687	+ 1.7
Boots and shoes.....	72	do.....	61,479	61,152	— .5	1,241,895	1,234,655	— .6
Car building and repairing.	40	1 month.	45,131	44,567	— 1.3	2,398,751	2,444,858	+ 1.9
Cigar manufacturing.....	54	1 week..	17,373	17,423	+ .3	272,603	284,550	+ 4.4
Men's ready-made clothing	45	do.....	18,453	18,718	+ 1.4	360,881	407,249	+ 4.2
Cotton finishing.....	18	do.....	11,059	11,360	+ 2.7	194,881	205,205	+ 5.3
Cotton manufacturing.....	56	do.....	49,029	48,471	+ .9	679,569	697,800	+ 2.7
Hosiery and underwear...	62	do.....	25,854	25,705	— .6	369,512	362,945	— 1.8
Iron and steel.....	99	1 month.	170,585	165,950	— 2.7	11,773,656	11,143,225	— 5.4
Leather manufacturing....	34	1 week..	14,450	14,714	+ 1.8	315,957	324,839	+ 2.8
Paper making.....	56	do.....	25,890	25,729	— .6	590,594	565,825	— 4.2
Silk.....	48	2 weeks.	13,286	14,761	+11.1	419,279	509,652	+21.6
Woolen.....	49	1 week..	18,763	24,625	+31.2	305,502	421,099	+37.8

Nine of the 13 industries reporting show increases and 4 decreases in the total amount of the pay roll in March, 1919, when compared with February, 1919. An increase of 37.8 per cent appears in woolen, which is largely due to the unsettled labor conditions during January and February. Silk shows an increase of 21.6 per cent. Iron and steel and paper making show percentage decreases of 5.4 and 4.2, respectively.

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported

pay periods. The following table gives in comparable form the figures for February, 1919, and March, 1919:

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN FEBRUARY AND MARCH, 1919.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (—)
			February, 1919.	March, 1919.	
Automobile manufacturing.....	26	1 week.....	68,127	73,448	+ 7.8
Boots and shoes.....	30	do.....	15,086	15,001	— .6
Car building and repairing.....	39	1 month.....	39,994	39,885	— .3
Cigar manufacturing.....	22	1 week.....	5,385	5,507	+ 2.3
Men's ready-made clothing.....	6	do.....	9,134	9,410	+ 3.0
Cotton finishing.....	15	do.....	8,076	8,425	+ 4.3
Cotton manufacturing.....	33	do.....	23,510	23,615	+ .4
Hosiery and underwear.....	22	do.....	10,737	10,898	+ 1.5
Iron and steel.....	85	1 month.....	141,840	137,771	— 2.9
Leather manufacturing.....	20	1 week.....	11,217	11,283	+ .6
Paper making.....	25	do.....	11,553	10,749	— 7.0
Silk.....	24	2 weeks.....	7,710	8,246	+ 7.0
Woolen.....	43	1 week.....	11,290	15,832	+40.2

#### CHANGES IN WAGE RATES.

During the period February 15 to March 15, 1919, there were establishments which reported increases in the wage rates in 7 industries and decreases in 2 industries, while 1 establishment in boots and shoes reported a change but did not state whether it was an increase or a decrease. Of the establishments reporting many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Automobile manufacturing: In one establishment the average hourly rate was increased 0.0331 cent.

Boots and shoes: A small number of the employees in one factory received an increase of 21 per cent. One plant reported an increase but did not give any further particulars, while another plant reported a change of 10 per cent, affecting all of the employees, but failed to state if this were an increase or a decrease.

Cigar manufacturing: An increase of 10 per cent was reported by one concern, but no data were given as to the percentage of employees affected.

Men's ready-made clothing: Approximately 78 per cent of the force in one establishment received an increase of 10 per cent; and about 10 per cent of the force in another establishment received an increase of approximately 12 per cent.

Cotton finishing: An increase of 3 per cent was given by one firm but no statement was made as to the number of employees receiving the increase.

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Cotton manufacturing: Two decreases of 10 per cent were reported, one of which affected the entire force, while no information was given as to the number of the employees affected in the second plant.

Iron and steel: A decrease of  $17\frac{1}{2}$  per cent, affecting 40 per cent of the force, was made in one plant; and a 17 per cent decrease was reported by another plant, but no information was given as to the number of the employees affected. Decreases of 10 per cent went into effect in three establishments and affected 40 per cent of the men in one, 25 per cent in another, but the third plant failed to give any further data, while approximately  $68\frac{1}{2}$  and 40 per cent of the employees were decreased about 10 per cent in two other plants. Seven establishments made decreases ranging from 5 to 9 per cent, affecting  $37\frac{1}{2}$  per cent of the employees in one plant, the tonnage men in another, about 1 per cent of the employees in the third, and  $33\frac{1}{4}$  per cent of the force in the fourth plant, while the decreases in the remaining establishments affected 20 per cent of the men in one, 50 per cent in another, and  $66\frac{2}{3}$  per cent of the employees in the seventh establishment. The tonnage men in one concern were decreased but no data were given as to the per cent of increase or the number of men affected.

Paper making: An increase of about 10 per cent was given in two mills, affecting approximately 7 per cent of the force in one mill and slightly more than 1 per cent in the second mill.

Silk manufacturing: An increase of 10 per cent to 25 per cent of the employees was reported by one concern.

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INDEX NUMBERS OF EMPLOYMENT AND OF PAY ROLL, JANUARY,  
1915, TO MARCH, 1919.

Index numbers showing relatively the variation in the number of persons employed and in pay-roll totals in 13 industries by months from January, 1915, to March, 1919, have been compiled and are presented in the two following tables. These index numbers are based on the figures for "Employment in selected industries," appearing in this and preceding issues of the REVIEW. The seven industries shown in the first table are the only ones for which the bureau has comparable data as far back as January, 1915. Therefore, January, 1916, is taken as the basis of comparison.

The number of persons whose names appeared on the pay roll for the base month is represented by 100. The amount of money carried on the pay rolls is likewise represented by 100. To illustrate, if the number of persons employed in the iron and steel industry in January, 1919, is taken as 100, then the number employed in that industry in March, 1919, was 125; that is, it had increased 25 per cent; and

if the money pay roll in January, 1916, be taken as 100, the pay roll in March, 1919, represented 236; or, in other words, the amount paid in wages was more than twice as much in March, 1919, as in January, 1916.

INDEX NUMBERS OF EMPLOYMENT AND OF PAY ROLL, JANUARY, 1915, TO  
MARCH, 1919.  
[January, 1916=100.]

Month and year.	Boots and shoes.		Cotton finishing.		Cotton manufacturing.		Hosiery and underwear.		Iron and steel.		Silk.		Woolen manufacturing.	
	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.
<b>1915.</b>														
January.....	87	80	85	81	101	98	87	76	74	62	91	83	88	81
February.....	87	77	94	90	101	103	91	81	71	65	93	90	88	80
March.....	83	71	91	89	103	105	91	85	77	72	93	92	91	84
April.....	77	61	83	82	102	103	94	83	80	73	90	85	93	88
May.....	79	66	93	93	103	104	96	90	82	74	90	88	94	86
June.....	80	71	87	86	102	99	98	92	85	81	90	85	89	79
July.....	81	73	92	85	103	99	96	90	87	75	89	85	92	79
August.....	82	76	90	88	101	100	94	89	90	83	91	87	90	78
September.....	82	76	90	87	101	101	98	89	93	87	92	87	99	90
October.....	90	89	94	92	102	94	100	98	97	91	94	94	99	92
November.....	94	97	104	94	103	99	101	100	97	93	97	100	102	94
December.....	109	103	97	100	102	98	104	106	97	101	98	106	103	98
<b>1916.</b>														
January.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100
February.....	100	99	101	105	101	108	101	106	102	113	97	105	102	108
March.....	101	101	103	107	101	110	103	108	105	115	100	109	102	109
April.....	99	97	98	103	101	111	104	106	104	115	101	108	104	110
May.....	98	99	95	110	101	116	105	111	108	126	99	108	105	117
June.....	99	102	96	110	102	115	106	110	109	128	100	110	103	112
July.....	100	101	96	107	102	112	104	102	110	111	101	100	101	110
August.....	99	98	97	107	100	112	102	102	113	125	100	103	97	104
September.....	98	98	96	109	100	114	104	108	115	130	99	104	101	111
October.....	98	99	96	110	100	110	106	112	115	135	100	109	102	108
November.....	102	113	99	114	100	115	107	119	117	138	98	108	103	116
December.....	107	125	101	126	102	123	108	124	118	144	100	112	105	128
<b>1917.</b>														
January.....	108	126	99	123	101	121	107	121	122	152	100	112	107	132
February.....	108	128	99	122	102	123	108	120	123	149	99	114	106	131
March.....	107	126	99	124	101	125	109	124	124	159	98	116	108	131
April.....	106	117	96	121	101	122	106	117	124	148	97	115	105	124
May.....	104	122	98	132	100	127	108	126	127	176	95	118	106	140
June.....	105	132	98	134	100	135	107	128	129	176	93	118	104	139
July.....	102	123	94	124	101	135	105	126	130	183	93	107	104	140
August.....	97	122	94	123	99	129	103	122	134	183	91	107	102	136
September.....	91	121	96	125	98	133	104	125	133	179	89	107	104	142
October.....	93	121	95	128	98	135	105	133	135	212	88	111	107	158
November.....	101	137	98	140	100	153	106	144	136	214	88	111	110	168
December.....	101	162	100	146	101	160	108	148	136	207	88	111	112	175
<b>1918.</b>														
January.....	101	161	96	132	100	153	106	134	134	184	86	102	107	159
February.....	102	158	96	129	95	140	107	135	135	190	88	104	105	159
March.....	103	172	98	141	100	162	108	159	137	206	89	120	109	172
April.....	99	166	94	147	98	168	108	161	136	206	88	123	109	166
May.....	97	166	93	149	96	173	107	166	138	236	87	127	106	180
June.....	96	173	93	153	96	179	107	165	139	235	87	124	106	180
July.....	98	176	97	169	97	192	108	175	137	220	85	121	105	185
August.....	96	173	95	161	97	189	107	171	138	245	83	123	104	189
September.....	95	183	92	165	95	193	105	175	137	249	79	127	103	191
October.....	89	171	88	152	87	163	95	155	138	282	79	128	95	162
November.....	92	156	89	147	92	164	101	148	135	257	76	107	98	148
December.....	95	207	92	170	98	206	101	179	138	279	77	127	90	156
<b>1919.</b>														
January.....	95	211	84	143	99	198	97	159	136	265	79	123	74	117
February.....	95	201	71	114	95	160	90	144	128	250	75	108	43	65
March.....	95	200	73	120	95	165	90	141	125	236	83	131	56	89



## INDEX NUMBERS OF EMPLOYMENT AND OF PAY ROLL, FEBRUARY, MARCH, OR NOVEMBER, 1915, TO MARCH, 1919.

[January, 1916=100.]

Month and year.	Automobile manufacturing.		Car building and repairing.		Cigar manufacturing.		Men's ready-made clothing.		Leather manufacturing.		Paper manufacturing.	
	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.	Number on pay roll.	Amt. of pay roll.
<b>1915.</b>												
February.....			71	71			98	98				
March.....			80	87	106	91	92	86				
April.....			67	71	90	88	90	70				
May.....			86	91	98	92	94	86				
June.....			87	97	94	94	95	95				
July.....			92	104	98	99	97	107				
August.....			89	92	92	94	83	86				
September.....			95	97	97	93	80	83				
October.....			99	108	106	109	84	95				
November.....	99	108	104	113	108	116	88	107	97	91	84	92
December.....	100	100	108	133	106	111	81	93	101	103	96	99
<b>1916.</b>												
January.....	100	100	100	100	100	100	100	100	100	100	100	100
February.....	112	111	104	121	95	94	98	105	112	111	105	109
March.....	114	117	109	132	99	97	100	106	111	105	103	106
April.....	112	114	110	132	93	96	97	106	110	108	104	107
May.....	113	119	109	133	90	96	102	105	106	109	106	112
June.....	109	115	111	124	91	98	105	116	104	112	108	118
July.....	116	105	108	126	91	99	105	122	106	113	107	117
August.....	117	119	109	125	90	97	97	118	110	118	109	122
September.....	123	132	113	128	93	105	93	112	101	111	102	118
October.....	132	148	111	132	97	112	95	116	111	129	103	122
November.....	129	155	117	145	93	110	101	126	118	131	101	124
December.....	125	135	116	154	96	117	92	117	116	141	114	138
<b>1917.</b>												
January.....	133	137	111	136	97	111	107	117	124	141	118	135
February.....	134	149	112	134	98	113	107	123	121	145	117	135
March.....	135	158	109	142	100	117	110	132	119	142	117	136
April.....	133	153	104	130	92	106	110	123	114	133	116	135
May.....	130	156	105	144	92	113	113	135	109	133	113	141
June.....	125	146	104	144	94	118	118	144	106	129	115	144
July.....	118	141	103	134	94	117	113	151	105	126	111	139
August.....	120	136	107	146	87	107	108	141	104	130	103	138
September.....	125	153	96	129	91	114	103	136	104	136	109	143
October.....	126	160	103	153	98	127	101	139	104	144	110	148
November.....	122	165	108	166	103	137	104	154	111	157	111	161
December.....	121	156	113	170	103	136	107	162	114	172	114	160
<b>1918.</b>												
January.....	119	137	113	151	103	129	102	147	111	163	112	146
February.....	119	142	112	154	101	131	105	155	108	154	109	147
March.....	123	158	111	167	104	141	101	159	106	165	113	168
April.....	124	161	108	166	103	142	101	154	102	161	112	171
May.....	124	172	109	177	88	121	101	168	101	175	113	174
June.....	126	175	102	163	94	133	101	170	104	192	113	181
July.....	122	170	110	196	96	139	102	172	106	192	114	191
August.....	118	177	116	240	92	121	98	163	105	194	114	204
September.....	120	182	119	242	93	135	94	154	102	188	114	203
October.....	121	192	125	271	87	125	86	146	98	177	106	194
November.....	123	174	126	263	92	137	85	139	99	172	112	191
December.....	114	174	125	250	95	155	83	147	100	198	116	217
<b>1919.</b>												
January.....	108	159	122	234	89	141	76	142	101	191	115	206
February.....	108	172	109	197	89	137	78	142	101	196	113	197
March.....	111	175	107	200	89	143	79	148	103	201	112	189

EMPLOYMENT IN FRANCE IN JULY, 1918.<sup>1</sup>

Following the precedent employed in previous investigations made by the labor inspectors relative to industrial employment, data were collected in July, 1918, from 41,475 establishments, employing in normal times 1,384,049 persons. On this date, 38,556 of these establishments were operating, and employing 1,318,903 persons. The distribution by industry groups, of the establishments open and persons employed, at the various dates on which investigations were made, are as follows:

NUMBER OF ESTABLISHMENTS REPORTING AND NUMBER OF EMPLOYEES IN NORMAL TIMES, AUGUST, 1914, AND JULY, 1918.

Industry group.	Number of establishments reporting in—			Number of employees reported in—			Per cent of—			
	Normal times.	August, 1914.	July, 1918.	Normal times.	August, 1914.	July, 1918.	Establishments reporting in—		Employees reported in—	
							August, 1914.	July, 1918.	August, 1914.	July, 1918.
Food preparations.....	4,028	2,980	3,765	84,481	45,534	57,958	74	93	54	69
Chemical.....	1,322	773	1,244	66,768	27,905	77,118	60	94	42	111
Rubber, paper, and cardboard.....	689	316	656	44,883	14,425	34,471	46	95	32	77
Printing.....	1,110	549	1,020	81,742	11,456	17,441	49	92	36	75
Textiles.....	3,614	1,074	3,323	301,739	101,349	239,275	47	92	34	79
Clothing.....	7,998	4,731	7,464	123,380	43,558	103,811	60	93	35	74
Leather and hides.....	2,095	1,227	1,943	66,220	25,496	57,308	58	93	39	77
Woodworking.....	4,202	1,527	3,770	74,663	18,771	68,560	36	90	25	72
Metallurgy (crude).....	6,176	2,780	5,864	316,071	101,490	485,486	45	95	32	151
Metals (refined).....	519	60	484	6,996	1,119	5,142	12	93	15	79
Precious stones.....	81	60	69	2,559	513	1,383	74	85	24	51
Building trades, including stoneworking.....	1,532	676	1,237	78,370	10,424	41,304	44	81	18	51
Earth, clay, and stoneware.....	1,063	373	866	76,712	16,021	42,579	35	81	21	76
Storage and transportation.....	425	273	416	25,336	13,599	25,130	88	98	45	80
Commerce.....	6,621	5,029	6,435	84,129	37,887	61,942	76	97	45	74
Total.....	41,475	22,448	38,556	1,384,049	469,746	1,318,903	54	93	34	95

The data given in the above table are not exactly comparable with that reported for previous investigations, for the reasons that the establishments reporting in July, 1918, are not identical with those reported for earlier dates. But the differences are of such small importance that they may be considered as negligible.

As shown by the table the number of employees in these establishments form 95 per cent of the number employed in them in normal times. The number of mobilized men employed in these establishments may be estimated as forming 24 per cent of all employees engaged in them; it therefore follows that, if from the number employed in normal times this proportion is deducted, the number employed in July, 1918, exceeds by 19 per cent the number employed

<sup>1</sup> Bulletin du Ministère du Travail et de la Prévoyance Sociale (Paris), November and December, 1918.

just after mobilization. The groups of industry in which an increased number of employees was found, after making deductions for mobilization, are as follows: Chemicals, 42; rubber, paper, and cardboard, 34; woodworking, 13; metallurgy (crude), 22; metals (refined), 86; and storage and transportation, 31 per cent. The only industries employing more persons in July, 1918, than under normal conditions, no deduction for mobilized men being made, were chemicals and metallurgy (crude), in which the per cent of increase was 15 and 54, respectively.

The investigation applies to such establishments only as are subject to inspection by the labor office, and does not include mines, quarries, common carriers (railways and tramways), or establishments under the control of the ministries of war and navy. In these last two services there has been a notable increase in the number of employees.

The following table shows the number and proportion of each sex employed in these 41,475 establishments before the war, in August, 1914, and July, 1918.

NUMBER AND PROPORTION OF MEN AND WOMEN EMPLOYED IN INDUSTRIAL ESTABLISHMENTS BEFORE THE WAR, AUGUST, 1914, AND JULY, 1918.

Date of investigation.	Number of employees.			Per cent of employees.			Proportion of each sex employed in July, 1918, compared with August, 1914.		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
Before the war...	929,407	454,642	1,384,049	67.2	32.8	100	100	100	100
August, 1914.....	290,348	179,398	469,746	61.8	38.2	100	81	39	34
July, 1918.....	785,380	533,523	1,318,903	59.5	40.5	100	84	117	95

The following table shows the distribution of women in the various industries before the war, in August, 1914, and July, 1918.

NUMBER OF WOMEN EMPLOYED IN INDUSTRIAL ESTABLISHMENTS BEFORE THE WAR, AUGUST, 1914, AND IN JULY, 1918.

Industry group.	Number of women employed in—			Per cent of women employed, compared with before-war employment, in—	
	Normal times.	August, 1914.	July, 1918.	August, 1914.	July, 1918.
Food preparations.....	32,774	14,958	22,587	46	69
Chemical.....	13,085	6,217	18,439	48	141
Rubber, paper, and cardboard.....	17,705	6,964	17,335	39	98
Printing.....	9,635	4,602	7,073	48	74
Textiles.....	183,881	72,631	169,814	39	92
Clothing.....	98,971	32,113	90,191	32	91
Leather and hides.....	22,119	9,094	24,604	41	101
Woodworking.....	9,360	2,311	14,571	30	156
Metallurgy (crude).....	17,731	7,452	119,966	42	677
Metals (refined).....	2,646	549	2,252	21	85
Precious stones.....	1,245	392	983	31	79
Building trades, including stoneworking.....	420	236	1,264	56	291
Earth, clay, and stoneware.....	14,504	3,115	11,394	21	79
Storage and transportation.....	223	192	1,029	86	461
Commerce.....	30,342	18,072	32,021	59	105
Total.....	454,642	179,398	533,523	39	117

In addition to the number of women working in establishments subject to the inspection service, there were in September, 1918, 600,733 women engaged in service connected with the national defense, including the larger railway systems (*grands réseaux*). In most of the various branches of the national defense service women formed approximately 20 per cent of all employees. In September, 1918, the percentage of women to all employees in the air service was 27.96; in health service 47.39; and in armament 12.21.

During the period October 1, 1917, to September, 1918, the number of women employed in branches of service for national defense increased from 446,212 to 600,733. The total number of all employees on October 1, 1917, was 2,922,461, and on September 1, 1918, 2,973,783, an increase of 51,322, of which 12,912 were men and 38,410 were women. On September 1, 1918, there were 301,239 persons employed on the important lines of railroads (*grands réseaux*), of whom 57,910 were women. From December 1, 1917, to September 1, 1918, the number of women employees in this service increased 9,275, or 19.1 per cent.

The report gives in some detail the occupations in which women are engaged, and in some instances indicates that when an opportune time is reached there should be a readjustment in the character of labor which they are now called upon to perform.



## EXTENT OF EMPLOYMENT OF WOMEN IN GERMANY DURING THE WAR.

No reliable figures appear to be available as to the real extent of the employment of women in Germany during the war, but data as to employment of both males and females have been compiled, based on returns from 5,135 sickness insurance societies, which, it is estimated, represent from one-half to three-fourths of the total number of persons employed for a wage or salary in Germany. These data are given in the *Deutscher Reichsanzeiger* for February 25, 1919, and are reproduced in the *British Labor Gazette* for March, 1919 (page 87), from which this account is taken. These figures, depicting the situation as of July 1, 1918, are presented in the following table in comparison with the extent of employment of males and females on July 1, 1914, and July 1, 1917, respectively:

EXTENT OF EMPLOYMENT OF MALES AND FEMALES IN GERMANY ON JULY 1, 1914, 1917 AND 1918, AND PER CENT OF CHANGE AT EACH DATE.

Date.	Number of employed persons covered by returns.		Per cent of increase (+) or decrease (—) as compared with preceding date.	
	Males.	Females.	Males.	Females.
July 1, 1914.....	6,473,392	3,466,731		
July 1, 1917.....	3,888,183	4,014,977	—39.9	+15.8
July 1, 1918.....	3,874,698	4,050,189	—0.3	+0.9

The total number of women employed on July 1, 1918, is estimated at between seven and eight millions.

Considering the extent of employment of women by trades, it appears that the maximum increase occurred in the munitions industry proper, and the ore smelting, metal, and engineering industries (where the numbers rose about 408 per cent between July 1, 1914, and July 1, 1918), in the electrical trades (288 per cent), and in the chemical industry (364 per cent). In the building trades the number of women workers increased about 225 per cent between those two dates. A decrease in the number of woman employees is reported in the textile, clothing, food, and tobacco trades, in all of which the output was greatly restricted owing to lack of raw material. A considerable influx of women is noted in the so-called nonfactory trades, such as smithing, miscellaneous metal working, and plumbing, where the numbers employed increased 350 per cent between the dates mentioned; in the joinery trades, where they increased 153 per cent; and in hairdressing, where the increase was 67 per cent.

## COLLECTIVE BARGAINING.

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### BRIDGEPORT PLAN OF ORGANIZATION FOR COLLECTIVE BARGAINING COMMITTEES.

The labor disturbances which occurred during the latter part of 1918 at Bridgeport, Conn., affecting the production of munitions and other war supplies, assumed such a serious aspect that the National War Labor Board was called upon to investigate and, if possible, compose the differences between the employers and the striking workers. After an exhaustive investigation of the questions at issue and the failure on the part of the board to reach a unanimous agreement upon certain disputed points, an umpire was appointed to render a decision that would be acceptable alike to the board and to the parties in disagreement. In August the umpire submitted his report to the board, which approved it, and the decision was later accepted by a large number of the employees. Many, however, refused to agree to its terms and President Wilson thereupon addressed a letter to them requesting that they return to work and suggesting certain penalties that would be imposed should they refuse. The President also addressed a letter to the employers whom, he was informed, had refused to reemploy the workers after they had indicated a willingness to return to work. An account of this controversy, the award of the umpire, and the letters of the President are published in the MONTHLY LABOR REVIEW for October, 1918 (pp. 19-25).

This controversy emphasized the desirability of providing for the constitution of collective bargaining committees under a plan which should be applicable to all the plants in Bridgeport working on war contracts; said committee in each instance to be organized for the purpose of developing a clearer understanding of the problems pertaining to the company and its employees, by furnishing a means of free interchange of opinions and suggestions on all matters of mutual concern and interest within the business. The plan which was finally adopted was the result of careful and mature deliberations on the part of the representatives of employers and employees, each of whom went into the conferences with the determination to effect some workable scheme by which the workpeople and the management could get together and mutually agree upon questions affecting the interests of all. This plan provides for the election of

employees' department committees and employees' general committees and prescribes by-laws governing the powers and functions and the method of procedure of these committees, and also makes provision for a referendum and recall of duly elected committeemen, and for amendment of the by-laws. This plan was approved on November 27, 1918, by the machinists union of Bridgeport and by the National War Labor Board, and on December 16 by the manufacturers and employees of Bridgeport.

One of the early announced principles of the National War Labor Board relates to the right of employees to organize and to bargain collectively, and reads as follows:

The right of workers to organize in trade-unions and to bargain collectively and through chosen representatives is recognized and affirmed. This right shall not be denied, abridged, or interfered with by employers in any manner whatsoever.

A similar provision recognizes the right of employers to organize and to bargain collectively. This general principle has been reaffirmed by the board in a great many of its subsequent decisions, and the plan for the organization of collective bargaining committees which was prepared primarily for the Bridgeport industries has been put out by the board as a concrete development of the general principle which it has consistently urged. It may be said that the National War Labor Board is daily receiving requests for copies of this Bridgeport plan from business concerns all over the country, indicating the widespread interest manifested by employers who are coming to realize the necessity of meeting in some definite way the demand for closer cooperation between workers and management.

#### TEXT OF PLAN OF ORGANIZATION FOR COLLECTIVE BARGAINING COMMITTEES.

The text of the plan of organization and the by-laws for collective bargaining committees instituted by the National War Labor Board for Bridgeport, Conn., is as follows:

#### ORGANIZATION.

##### A. EMPLOYEES' DEPARTMENT COMMITTEES.

*Elections.*—1. Employees' department committees shall consist of three employees who have actually worked in the department or section of the plant involved for a period of three (3) months immediately preceding election. There shall be such a committee for each department or section in charge of a foreman or forelady.

2. Said committee shall be elected by the direct vote of the employees. Each employee of any department shall have the privilege of voting for three fellow employees as his or her choice for said committee membership. The three employees receiving the highest number of votes shall be declared elected.

3. Notice of all said elections must be either delivered to each employee in the department or section involved, or said department or section must be adequately placarded with posters; said notices or placards must fully explain the purposes and

conditions of said elections and they must be distributed or posted at least one full week prior to the date of actual election.

4. The judges of election for the first election shall be an examiner or other nonpartisan representative of the National War Labor Board and two or more employees chosen by him from the department or section involved, one of whom shall be, whenever possible, the timekeeper of the department, who will serve as checker of those voting or some employee qualified to recognize the employees voting as bona fide employees of that department. Such judges shall hold the election, count the votes, certify the returns, and announce, at the earliest possible hour, the names of those elected.

Employee judges shall have been employed in the department or section involved for at least three (3) months immediately preceding elections.

The judges of election shall have final decision as to all questions arising at the time of and in connection with said elections, except that they shall be guided and governed by the conditions of said elections as set forth upon said notices or posters, which shall be in full accord with the organization plan and by-laws.

5. The employee receiving the highest number of votes in each such election shall be declared the chairman of the committee, but in case of a resignation as chairman the committee elected shall have the right of choice.

6. Where both men and women are employed in a department or section, proper representation upon its committee shall be guaranteed to both.

7. The first election shall be held at such time as the administrative examiner shall decide, and at such place as in his opinion the greatest number of votes of the eligible employees would be obtained. Such employees will be given a printed ballot and a free opportunity to vote in accordance with their wishes and choice. The privilege of an absolutely secret ballot shall be guaranteed and enforced.

8. During the actual time covered by the elections, all foremen, higher officials, employees of other departments and nonemployees shall absent themselves from the place of election, except for good and sufficient reason under the personal supervision of the National War Labor Board's representative.

9. Where a tie occurs for the last place, or where a tie occurs for the chairmanship of a committee, such tie shall be decided by lot by the judges of the election. If there shall be a complete tie, the employees thus elected shall choose their own chairman.

#### B. EMPLOYEES' GENERAL COMMITTEES.

10. *Elections.*—In addition to said department committees, there shall be instituted for each plant an employees' general committee composed of the chairmen of all the department committees, except that any plant in which the number of employees is such that only one department committee is chosen shall have no general or executive committee.

11. If the number of any general committee as originally constituted is too large for efficient working, said committee shall meet as soon as practicable after the election of the department committees and proceed to elect from their own number an executive committee, to be technically known as the employees' executive committee, which shall be vested with the duties and powers of said general committee, except those reserved for the committee as a whole.

12. Whenever at the initial election it is found advisable to elect an executive committee, said general committee shall be called together by the administrative examiner and presided over, for this one purpose only, by an examiner, or other nonpartisan representative of the National War Labor Board, who shall see that the election of said executive committee is conducted in accordance with such instructions as the administrative examiner may issue in order to insure a fairly elected and representative executive committee.



13. Said executive committee shall consist of three, five, seven, or nine employee members, the number for each plant to be determined preceding the first election, by the administrative examiner.

14. Each general and executive committee shall elect from its own members, by a majority vote, a permanent chairman.

15. Where general committees are hereinafter referred to it shall mean executive committees, wherever such have been elected, unless otherwise specifically indicated.

#### BY-LAWS.

##### A. EMPLOYEES' DEPARTMENT COMMITTEES.

16. *Powers and functions.*—Department committees, upon request, may adjust with a like or less number of the management's representatives, by agreement, all questions arising in their respective departments which the individual employees were unable to settle by direct negotiation with their foremen.

17. Department committees may, and should, refrain from referring to the management all questions presented by request, or otherwise, from individual employees, which upon investigation by said committee are found to be without merit.

18. Department committees, upon direct presentation individually or collectively, by employees of their respective departments, may adjust with the management, by agreement, all questions of mutual interest.

19. Department committees may initiate and adjust with the management, by agreement, any and all matters affecting or appertaining to the employees, individually or collectively, of their respective departments.

20. Department committees may take up, of their own accord or upon request by the management, such problems as the conduct of employees, individually or collectively, and thus endeavor to increase production and cooperation.

21. Department committees may adjust with the management, by agreement, whether presented by appeal, reference or initiation, all questions in reference to the correct and proper application of the Bridgeport award, including the rulings and interpretations thereof, as made by the local examiner, to the employees, individually or collectively, of their respective departments, with the proviso that the rights of appeal guaranteed by the award, including said rulings and interpretations, shall not be in any way denied. Power to alter, change, or add to the rulings and interpretations of the award as made by the local examiner is not vested in any committee.

22. Department committees shall not have executive or veto powers, such as the right to decide who shall, or shall not, be employed; who shall, or shall not, be discharged; who shall, or shall not, receive an increase in wage; how a certain operation shall, or shall not, be performed, etc.

23. The individual members of department committees are and shall remain under the same rules and regulations as the other employees.

24. Department committees are restricted to the adjustment of matters only within their jurisdiction, as outlined under the organization and by-laws, by agreement, with their managements. The obligation to promptly put into effect all matters agreed upon is placed entirely upon the management.

25. Department committees may, by mutual consent of the representatives of the management, consider and have put into force, by agreement, any matter not otherwise specifically covered in these by-laws.

26. Members of department committees shall serve for one full year, or until their successors are elected.

27. Any vacancy, or vacancies, in the membership of a department committee shall be filled by a special departmental election.

28. After the initial election under the supervision of the examiner of the National War Labor Board, rules for subsequent elections, and any general rules or regulations

pertaining to department, general, and executive committees, may be decided by a two-thirds vote of the entire membership of the joint executive committee, or general committee wherever an executive committee was not elected.

29. No employee shall be eligible to membership on a department committee, nor to appointment as judge of election, who has not been continuously in the employ of the department involved for at least three (3) months immediately preceding the election; provided, however, that if there shall not be at the time of the election at least six employees of three months' standing, said three months' service qualification shall be omitted.

30. *Method of procedure.*—Employees desiring to have their department committee act for them, individually or collectively, whether as an appeal from a decision of their foreman, or as a direct presentation, shall file their case with the chairman of said committee in writing and signed, if practicable; otherwise, the chairman of the committee shall reduce same to writing. These matters shall be transacted on the premises outside of working hours.

31. The chairman of department committees shall accept for consideration all cases filed as provided under section 30.

32. The chairman of any department committee shall call a meeting of the committee at such times and places as the circumstances demand for the consideration of such cases as have been filed, and also of such matters as the committee contemplates initiating. Such meeting shall be held on the premises but not during working hours or on company time, except upon consent of the management.

33. Whether cases or matters considered in accordance with the provisions of section 32 shall be taken up with the management shall be decided by a vote of the committee; two votes for or against any proposition shall decide, and no reference or appeal to the joint department, executive, or general committee can thereafter be made.

34. Whenever it is desirable for a department committee to meet with the management for the presentation and consideration of prepared cases or other matters the chairman of said committee shall request through the foreman of the department involved a joint conference with such representative or representatives as the management shall designate for this purpose, not to exceed in number the membership of said department committee. Such request shall be accompanied by a specification in writing of the matters to be considered.

35. The management shall meet with such committee department in a joint conference upon the date requested, or, if for any reason this is impracticable, upon one of the next six days thereafter mutually agreed upon, not counting Sundays and holidays.

36. Any management shall have the privilege of calling a department committee to a joint conference by the method set forth in sections 34 and 35.

37. The chairmanship of each joint conference shall alternate between the chairman of the department committee and the spokesman for the management's representatives.

38. All joint conferences shall be held immediately following the close of the day's work upon the date fixed, unless by unanimous vote some other date is fixed, either in the department involved or in some suitable room convenient thereto provided by the management for this purpose. Joint conferences may be held on company time by the consent of the management.

39. Joint conferences shall be private except where witnesses may be called. Full and free opportunity shall be granted to all present to discuss, from every angle and viewpoint, all cases and matters presented by either side at each joint conference.

40. Immediately following discussion of any issue at a joint conference a vote shall be taken upon the question at issue, and a majority of two votes of the entire membership of the joint committee shall decide; that is, five votes out of a joint committee of six shall control.

41. When an agreement has been reached the case or matter in issue is settled beyond appeal, and shall be promptly adjusted in accordance therewith.

42. When no agreement has been reached, the chairman of the joint conference, unless such case be withdrawn by the party proposing the action, shall immediately refer in written form the case or matter in issue to the chairman of the employees' general committee for presentation, discussion, consideration, and disposition at a joint conference between said employees' general committee and a like or less number of the management's representatives.

43. A record of proceedings of all joint conferences shall be made, signed by all members present.

44. Annual elections for members of department committees shall be held during November of each year.

#### B. EMPLOYEES' GENERAL COMMITTEES.

*Powers and functions.*—45. General committees in joint conference with the management's representatives shall review all cases and matters not settled in a joint conference between the department committee and the management, unless such case be withdrawn by the party proposing the action.

46. General committees, as a whole, in cooperation with the management's representatives, shall hold annual or special elections for members of the department committees in accordance with the above organization rules and regulations and such amendments thereto as may be decided upon by a two-thirds vote of the entire membership of the joint executive committee, or joint general committee, wherever an executive committee was not elected.

47. General committees, as a whole, shall have the right to fill by election from its members any vacancy occurring in their executive committees.

48. General committees are not vested with executive or administrative authority, except as specified in section 46.

49. General committees are restricted to the adjustment of matters only within their jurisdiction, as authorized under the organization and by-laws, by agreement with the management. The obligation to promptly put into effect all matters agreed upon is placed entirely upon the management.

50. Members of the general committees shall serve for one year, or until their successors have been elected.

51. Vacancies in general committees, as a whole, are automatically filled by the new chairman of the department committees from which the outgoing members originally came.

52. The right of a general committee, and also of the representatives of the management, to initiate and discuss in a joint conference any matter appertaining to the plant, as a whole, is hereby granted.

*Method of procedure.*—53. Whenever the chairman of a joint conference between a department committee and the management shall refer in written form any unadjusted case or question to the chairman of a general committee, the latter shall promptly turn the original or copy thereof over to the designated spokesman of the management's representatives, together with a request for a joint conference on some specific day.

54. The management shall meet with such general committee in joint conference upon the date requested, or, if for any reason this is impracticable, upon one of six days thereafter mutually agreed upon, not including Sundays or holidays.

55. Any management shall have the privilege of calling a general committee to joint conference by the method set forth in section 53.

56. The chairmanship of each joint conference shall alternate between the chairman of the general committee and the spokesman for the management's representatives.

57. All joint conferences shall be held immediately following the close of the day's work upon the date fixed, unless by unanimous consent some other date and time is selected, either in the department involved or in some suitable room convenient thereto provided by the management for this purpose. Joint conferences may be held during working hours and upon company time by the consent of the management.

58. Joint conferences shall be private, except when witnesses may be called. Full and free opportunity shall be granted to all present to discuss from every angle and viewpoint all cases and matters presented by either side at each joint conference.

59. Immediately following discussion of any issue at a joint conference a vote shall be taken upon the question at issue, and a majority of two votes of the entire membership of the joint committee shall decide; that is, five votes out of a joint committee of six, or seven votes out of a joint committee of ten, shall control.

60. When an agreement has been reached the case or matter in issue is settled beyond appeal and shall be promptly adjusted in accordance therewith.

61. In case the general or executive committee in joint conference fails to reach an agreement before other action shall be taken, said committee shall refer the matter in question to the highest executives of the plant management for consideration and recommendation.

62. A record of proceedings of all joint conferences shall be made, signed by all members present, and filed.

#### C. REFERENDUM AND RECALL.

*Method of procedure.*—63. Whenever the services of any committeeman as such becomes unsatisfactory the employees of the department which he represents shall have the privilege of the referendum and recall.

64. Whenever 20 per cent of the employees of any department shall sign a petition asking for a vote upon the recall of their committeeman and file said petition with the chairman of the general committee, a special election for that department shall be held by said committee promptly in order to determine whether said committeeman shall be recalled or continued in office.

65. If, at said special election, one-third or more of the actual employees of the department involved shall vote to retain the services of the committeeman in question, he shall not be recalled from service.

66. If at said special election more than two-thirds of the actual employees of the department involved shall vote to recall the committeeman in question his services as such shall cease forthwith.

67. Whenever a committeeman shall have been recalled, in accordance with section 66, the vacancy thus created shall be immediately filled in line with the provisions set forth in section 27.

#### D. AMENDMENTS.

68. The foregoing by-laws may be amended by a two-thirds vote at a joint conference of the general committee and the management.

#### PROCEDURE IN ELECTION OF SHOP COMMITTEES.

Prior to the formulation of the Bridgeport plan, the joint chairmen of the National War Labor Board approved a procedure for the election of shop committees which had been prepared for a specific case, but which is recognized as applicable, with certain modifications,

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to conditions existing in manufacturing plants generally. The text of this plan of procedure, approved October 4, 1918, is as follows:

In cases where elections are required to be held for the purpose of selecting shop committees the following shall be the procedure:

#### 1. NUMBER OF COMMITTEEMEN.

Shop committees shall be selected to meet with an equal or a lesser number of representatives to be selected by the employer. Each department or section of the shop shall be entitled to 1 committeeman for each 100 employees employed in the department or section. If in any department or section there shall be employees in excess of any even hundred, then an additional committeeman may be elected provided the additional employees beyond the even hundred shall be 50 or more; if less than 50 no additional representation shall be allowed. As an example: In a department or section employing 330 men, 3 committeemen will be elected; in a department employing 375 men, 4 committeemen will be elected.

#### 2. NOMINATIONS.

Due notice having been given of an election, 10 days shall be allowed during which nominations may be made for candidates. In order that a candidate's name may appear on the ballot, such person must be nominated either at a meeting of the employees or any part of them duly called for that purpose, or by petition signed by not less than 10 per cent of those qualified to vote for any candidate so nominated.

(a) *By convention.*—Meetings for nomination of candidates may be held at any places named in the calls for the same. The nominations and the attendance of at least 10 per cent of the persons entitled to vote for nominees at any such meeting must be certified to by the chairman and secretary of the meeting.

(b) *By petition.*—All nominating petitions must clearly name the candidate or candidates and have the signature of not less than 10 per cent of the bona-fide employees qualified to vote for such candidate.

(c) *Filing nominations.*—Nominations made either by meeting or by petition must be sent to the examiner of the National War Labor Board not later than 10 days after the notice of election is given, and the election shall be held on the fifth day next succeeding unless such day should be Saturday or Sunday or a holiday, in which event the election shall be held on the next successive workday.

(d) *Publishing lists of nominees.*—Lists of candidates selected by convention or petition and distinctively designated, may be posted by their respective supporters on a bulletin board to be provided by the employer, convenient to the voting booths, to assist voters in marking their ballots.

#### 3. ELECTIONS.

(a) *Place.*—The election shall be held in the place where the largest total vote of the men can be secured, consistent with fairness of count and full and free expression of choice, either in the shop or in some convenient public building, as the chief examiner shall decide after conference, if need be, with the secretary of the National War Labor Board.

(b) *Election officers.*—The election shall be conducted under the supervision of an examiner of the National War Labor Board, who shall select as assistants two or more employees of the department or section for which the election is held. These persons shall constitute the election board, which will conduct the election, count the votes, and certify as to the correctness of the count.

An employee of the company to be nominated by the employer, who shall preferably be the timekeeper or someone connected with the proper department or

section, who is qualified to certify to and identify the voters as bona fide employees, shall assist the election board in its duties.

(c) *Freedom from undue influence.*—All elections shall be held in accordance with the Australian or secret ballot. The names of all the nominees shall be printed in alphabetical order on the ballot, which shall clearly state the number to be voted for. This ballot shall be in the form that it may be folded so as to conceal the nature of the vote. Each employee presenting himself shall be certified to as qualified to vote and handed a ballot by the tellers. Upon indicating upon the ballot by marking a cross opposite the names of the candidates for whom the employee wishes to vote he shall himself place it in the ballot box. A booth or booths shall be provided where the employee may indicate his choice free from observation.

Foremen and other officials of the company shall absent themselves from the election to remove ground for a claim of undue influence.

(d) *Declaration of election.*—The candidates receiving the greatest number of votes shall be declared elected by the election board. In the event of a tie vote, the examiner of the National War Labor board shall call for a new election within five days.

#### 4. CHANGE OF PROCEDURE BY AGREEMENT.

After the initial election under the supervision of the examiner of the National War Labor Board, subsequent elections and any general rules or regulations pertaining to the selection of shop committees may be carried out through agreement between the employer and the committee so elected. Proper provision should be made for reports of the shop committees from time to time to their respective constituencies.

Approved by the joint chairmen, October 4, 1918.

## WAGES AND HOURS OF LABOR.

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### EARNINGS OF WOMEN IN CANDY FACTORIES IN MASSACHUSETTS.<sup>1</sup>

When in 1911 Massachusetts was considering the advisability of setting up minimum-wage boards, candy making was selected as one of four industries for investigation as to whether or not existing conditions called for such boards. In 1913, when the minimum-wage commission began its work, candy making was selected for a more extended investigation, which confirmed the findings of the earlier inquiry; both showed a low level of wage rates, with seasonal depression and irregular employment bringing actual earnings far below nominal rates.

In 1914 the commission established a wage board for the industry, which in February, 1915, brought in a majority report recommending \$8.75 per week as a minimum wage for experienced women. At this point the candy manufacturers applied for an injunction against the establishment of such a wage, questioning, among other grounds of action, the constitutionality of the minimum-wage law, and the board suspended proceedings until this question could be settled. In September, 1918, the Supreme Court of Massachusetts upheld the constitutionality of the minimum-wage law, and the commission, returning to its interrupted program, decided to make a new survey of wage conditions in candy making, to determine whether the situation, as then existing, called for the setting up of a minimum-wage board.

The results of this survey, which have recently been published, show several changes in conditions, the most important being the change in average weekly earnings. The inquiry included seven factories, in three localities, some working on war contracts and others not so engaged, selected as being fairly representative of wage conditions. In each establishment a transcript was made of the pay-roll records for all women and girls employed during the four months, June to September, 1918, inclusive, and data relating to wage rates, methods of payment, and so on, were secured. The earnings ranged as follows:

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<sup>1</sup> Massachusetts Minimum Wage Commission. Supplementary report on the wages of women in candy factories in Massachusetts, January, 1919. 42 pp. Bul. No. 18.

## AVERAGE WEEKLY EARNINGS, BY OCCUPATIONS.

[Based on pay-roll records in 7 factories for the period June-September, 1918.]

Occupation.	Total number.	Per cent of workers with weekly earnings of—							
		Under \$6.	Under \$7.	Under \$8.	Under \$9.	Under \$10.	Under \$11.	Under \$12.	\$12 and over.
Dipper.....	174	12.1	21.3	29.3	48.3	58.6	68.4	80.5	100.0
Plain packer.....	247	15.8	29.6	47.4	64.4	80.2	88.7	93.9	100.0
Fancy packer.....	137	17.5	27.7	41.6	65.7	78.8	88.3	92.0	100.0
Machine tender.....	169	10.1	23.1	39.6	62.1	85.2	93.5	96.4	100.0
Floor girl.....	73	50.7	64.4	76.7	90.4	94.5	98.6	98.6	100.0
Candy wrapper.....	114	10.5	22.8	41.2	55.3	67.5	78.1	88.6	100.0
Nut sorter.....	5	20.0	40.0	80.0	100.0	100.0	100.0	100.0	100.0
Molder.....	13	38.5	84.6	84.6	84.6	92.3	92.3	100.0	100.0
Miscellaneous.....	139	23.7	43.2	52.5	64.7	76.3	83.5	90.6	100.0
Total.....	1,071	17.6	31.1	45.1	62.8	76.7	85.1	91.3	100.0

In 1915 the minimum-wage board had fixed \$8.75 per week as the lowest rate which should be paid to an experienced worker; this table shows that in the autumn of 1918 nearly half the workers considered, 45.1 per cent, were earning less than \$8 a week. Even the dippers, the most highly skilled group, showed nearly one-third of their number earning less than \$8. In 1918 the minimum-wage board appointed to deal with the wages of women employed as office cleaners decided that \$11.54 was the lowest sum on which a self-supporting woman could live healthfully in Massachusetts; this table shows that only 15 per cent of the candy workers were earning as much or more than \$11 a week.

Considerable variations in earnings were found in the different factories.

In establishments Nos. 1, 3, and 4, 51.7 per cent, 48.6 per cent, and 38.5 per cent, respectively, are receiving \$9 a week or over. In the other four establishments, over three-fourths of the employees are receiving under \$9 a week. This group includes two small factories, one medium-sized, and one large factory; three are in the same general locality as the establishments paying the highest wages. \* \* \* A similar contrast in earnings of employees in these same establishments existed at the time of the previous investigation.

The table given above deals with earnings, not wages. It was found that since the outbreak of the war the straight-time wage had been largely superseded by piece rates combined with some form of bonus system, so that it was difficult to secure data concerning wages. In the case of three factories, however, it was found possible to compare wage rates with those of the earlier investigation, the figures for the two periods being as follows:



## WEEKLY RATES, BY ESTABLISHMENTS.

[Rates in 3 factories June-September, 1913, and June-September, 1918.]

Establishment and year.	Per cent of workers with weekly rates of—				
	Under \$6.	Under \$7.	Under \$8.	Under \$9.	\$9 and over.
Establishment No. 5:					
1913.....	42.1	72.0	95.3	100.0	.....
1918.....		10.7	31.0	54.8	45.2
Establishment No. 6:					
1913.....	70.8	75.0	79.2	83.3	16.7
1918.....	22.0	43.9	78.0	85.4	14.6
Establishment No. 7:					
1913.....	68.2	84.1	90.9	100.0	.....
1918.....	20.6	44.1	61.8	73.5	26.5
Total:					
1913.....	52.6	75.4	92.0	97.7	2.3
1918.....	10.1	26.4	49.7	66.7	33.3

In commenting on these figures the report calls attention to the increase in nominal wages since 1913:

At that time the proportion with rates under \$9 was 100, 83.3, and 100 per cent, respectively; while the corresponding percentages for 1918 are 54.8, 85.4, and 73.5 per cent. In the present study no employees appear in the lowest classes, those with rates of under \$5 weekly. The proportion of workers in the groups of under \$6, \$7, and \$9 in 1913 corresponds roughly to that in the groups under \$9, \$10, and \$12 in 1918, which would indicate an approximate increase of nearly \$3 a week in scheduled rates during the five-year period. As reported by the firm visited, a considerable part of this increase came within the past year. Reasons ascribed for the advances are the labor shortage and competition with munition plants.

An advance of \$3 a week would mean an increase of 60 per cent on \$5, of 50 per cent on \$6, of 43 per cent on \$7, and so on. According to conservative estimates the rise in the cost of living between July, 1914, and November, 1918, was from 65 to 70 per cent, so that only in the case of those receiving the lowest rates would the increase in wages approach the increase in cost of living. In spite of increases, real wages are apparently lower than in 1913.

The report brings to view some changes which have taken place in the industry as a result of war conditions. Hours were shorter than those prevailing in 1913, owing partly to the fact that the investigation covered a part of the dull summer season and partly to the restrictions on sugar, under which manufacturers found it difficult to secure enough to run their plants full time. Little substitution of women for men was observed. In part this was because men are largely employed in making hard candy, and when the sugar supply was reduced, hard candy, which requires proportionately more sugar than other kinds, was dropped, or made only for Government orders; and in part it was due to the fact that it was nearly as hard to secure women as men.

The most interesting change was in the methods of payment. Apparently up to the spring of 1918 there had been no great difficulty in securing the usual supply of workers at the usual low wages, but by that time the demand for women workers had become so strong that the candy manufacturers had to increase wages or go without help. But when wages were higher and help hard to get, it became an object to secure prompt and regular attendance and to encourage good workers to remain, so piece rates and bonus systems were introduced.

In four of the largest factories visited bonus systems were in operation. Three of the four paid in addition to the production bonus an attendance bonus. This is usually paid for perfect weekly attendance, and is frequently limited to the busy season. In one of the factories visited, however, it was paid throughout the year. The purpose of such a bonus is to enable the firm to keep a regular working force.

Special kinds of production bonus were found in different factories, where they were variously described as piece-rate system, task system, premium bonus, and differential bonus. All represent a reward for production beyond a definite standard. Up to that standard the employee receives a fixed time or piece rate as the case may be. On reaching the standard, she receives a special rate in addition to the regular rate. This is usually a piece rate or a percentage of the guaranteed wage.

One firm had worked out a detailed system of production standards for every operation in the factory. These standards are figured on the basis of hourly production, and have corresponding hourly bonus rates. If an employee averages one of these standard rates for the week, she receives, in addition to the regular wage, the bonus corresponding to the standard for that operation. \* \* \* In each of the factories where bonus systems were found, from two to three different forms were in operation.

In summing up the whole situation, the report calls attention to the fact that while there has been a considerable advance in wage rates and earnings since 1913, the advance has not equaled the increase in living cost for the same period. There has been no general increase in real wages, and for a considerable number of the women in the group investigated, average earnings remain at a level below the present cost of living.

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#### BRIEF FOR THE EIGHT-HOUR DAY FOR WOMEN.

A report has recently been issued giving the findings of the Illinois Industrial Survey, a commission created in accordance with an act of the legislature to "make a complete survey of all those industries in Illinois in which women are engaged as workers, with special reference to the hours of labor for women in such industries," and "the effect of such hours of labor upon the health of women workers."<sup>1</sup> The commission was appointed in January, 1918, and consisted of three doctors and two prominent labor women.

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<sup>1</sup> Hours and health of women workers. Report of Illinois Industrial Survey, December, 1918. Springfield, Ill. 120 pp.

The commission recognizes at the outset that their findings are not conclusive, nor, from a scientific point of view, satisfactory. A real determination of the effect of hours of work upon health would require long, difficult, and minute research, with the power of controlling conditions to such an extent that it would be almost impossible for any employer to submit his establishment to the experimentation necessary, and almost equally difficult to find employees who would accept the supervision required.

Nevertheless, the commission felt that much might be done in showing the trend of industrial practice with respect to hours, and by collating the opinions of the workers themselves and of health specialists as to the effect of long hours. Moreover, by comparing output under different schedules, where no factors except the hours had been changed, it might be possible to get an indication of the point at which fatigue enters as a handicap to the efficiency of the individual worker, the presumption being that fatigue carried beyond this point would be definitely harmful.

The data gathered on the first point show an unmistakable trend toward shorter hours. Reports giving the hours worked by women employees were received from 2,410 Illinois employers, covering 103,119 employees. The following table shows the situation, and also gives, for Chicago, corresponding data for five years ago:

NUMBER OF FIRMS AND EMPLOYEES AND PER CENT HAVING WORKING-DAY OF SPECIFIED HOURS IN CHICAGO, 1913 AND 1918, AND IN ILLINOIS OUTSIDE OF CHICAGO, 1918.

Item.	Total number reporting.	Per cent having working-day of—	
		Under 9 hours.	9 hours and over.
Chicago, 1913:			
Firms.....	3,049	33.0	67.0
Employees.....	101,643	23.2	76.8
Chicago, 1918:			
Firms.....	1,613	62.9	37.1
Employees.....	85,348	70.8	29.2
Illinois, outside of Chicago, 1918:			
Firms.....	797	32.6	67.4
Employees.....	17,771	31.6	68.4

The proportion of workers studied in Chicago having a day of under nine hours had risen from less than one-fourth in 1913 to seventenths in 1918, an increase of more than 200 per cent. This is especially significant because the Illinois law permits a 10-hour day and a 70-hour week for women, so that this change was not brought about by legislation. More than three-fifths of the Chicago employers studied were voluntarily setting hours for women at a lower figure than that permitted by law. An employer in fixing conditions of

work is naturally guided to a large extent by considerations of profit; naturally, also, whatever promotes the worker's efficiency tends to the employer's profit. Health is an important factor in efficiency. Hence, this trend toward lower working hours indicates a very practical belief on the part of employers that a working day of less than nine hours contributes to the health and efficiency of their women workers.

Opinions as to the effect of given conditions are always open to question; nevertheless the opinions of those who are working under or in connection with certain conditions have at least some significance, even though they may not be conclusive. Therefore the commission made a field study of 4,711 women working in Illinois establishments, selecting them at random in order to obtain a representative census of opinions. The women were asked whether or not their occupation affected their health in any way, and were also questioned as to the use of overtime, Sunday, or holiday work, posture while working, length of time in occupation, etc. The difference in the returns made by the long-hour and short-hour workers was striking:

In Illinois outside of Chicago 58.8 per cent of women working 61 hours or more per week made complaints concerning their work, while only 26.5 per cent of those working 43 to 48 hours made complaints. In Chicago 51.8 per cent of women working 61 hours or more per week made complaints, compared to 15.2 per cent among those working 44 to 48 hours.

\* \* \* \* \*

Complaints include "tired," "feet sore," "backache," "eyes tired," "nervous," "too tired for recreation." A number of employees stated that they "stalled" during the last hour of the day, and a number gave it as their opinion that they could do as much in a shorter working-day.

The report notes that in general bad conditions were grouped together. The long-hour industries were also the industries in which overtime and Sunday work were found most frequently, in which work which required standing was most prevalent, and in which the proportion of employed mothers was greatest. They were also the industries in which the labor overturn was greatest.

The group working 61 hours or more per week shows the lowest proportion of employees who have been in their positions one year or over of any of the hour groups in Chicago or in the remainder of the State. The greatest permanence is found in the 43-to-48 hour group in Chicago and in the under-43-hour group in Illinois outside of Chicago. This finding brings out perhaps more clearly than any other the employee's reaction to long hours.

Forty-one industrial physicians, supervising the health of 31,951 women workers, returned replies concerning the connection between hours of work and health of women workers. Nine of these were working for firms outside of Chicago, 30 for firms in Chicago, and 2 were



State employees doing work throughout the State. In general they agreed that long hours exercised a definite effect on health, and that good effects had been observed where hours were shortened. Thirty-five answered the question, "What, in your opinion, is the best length for the working day and week for women in industry?"

Of these, 26 said eight hours; one said eight to ten hours; one said seven and one-half to nine hours; one said seven and one-half hours; one said seven hours; one said six hours; one said nine hours; one said ten hours; two said they did not know.

A number of physicians gave as their reason for advocating the eight-hour day that it makes for a more efficient working force, and so favors both employer and employee. The physician (supervising a department store) giving eight to ten hours as the best length for the working day stated that longer hours were possible for the girls under his supervision because the work in that store was easy and the conditions good, but that his reply referred to his own industry alone. One physician advocating the eight-hour day stated that hours should be fewer than eight for workers in "hazardous" or "nervous" occupations.

The third line of approach, the study of comparative output under different schedules of hours, was undertaken not so much for its economic as for its physiological significance:

Since there is a direct connection between health and production, fatigue studies for varying hours are valuable. As the report of the divisional committee on industrial fatigue states, "one of the readiest means of detecting fatigue is by keeping a record of the output of the individual employee. \* \* \* A falling off in the output indicates fatigue. Where the duration of the working period has been changed fatigue can also be tested by comparing the average output per hour under the earlier and the later schedules."

Such comparisons are difficult to make, since so often when hours are changed other conditions are changed also. Three firms were found, however, which had reduced hours without making any other changes which would affect output, these firms being classed as belonging to (A) garment industry, (B) soap industry, and (C) corset industry. In shops A and B piece rates had been increased when hours were reduced, while in shop C they remained the same. In shops B and C the same group of workers was studied before and after the change. In shop A the entire force in a single department was studied. The following table shows the results:

EFFECT OF REDUCTION OF HOURS UPON OUTPUT OF THREE SPECIFIED SHOPS.

Shop.	Length of period studied.	Decrease in hours per week.	Increase in total output (per cent).	Increase in hourly output (per cent).
A.....	4 years.....	54 to 48.....	About 2.....	7.0.
B.....	9 months.....	55 to 48.....	3.97.....	11.8.
C.....	1½ years.....	54 to 48.....	13.4.....	31.5.

The report contains accounts of detailed studies on which the above summary is based, and of these perhaps the most decisive is that made in shop B. Here a group of 24 workers engaged in wrapping and packing a standard brand of soap was selected for special study. These had all been employed at this same work for at least three years previous to the period covered. Their output was studied for 10 weeks from February 25 to May 4, 1918, during which period they were working a 10-hour day, and for 10 weeks from August 5 to October 12, 1918, during which they had an 8½-hour day. In both periods the department was running to capacity, so that the factor of slack time did not enter.

When the company officials were asked for permission to study the output records, they replied, in effect, that they were willing but considered such a study unnecessary, since they knew the situation by observation.

Survey representatives were informed that the production per hour remained precisely stationary under 8½ hours as under 10, and that the production per week had fallen off in accordance with the decrease in hours. The rate of production per day per girl, the survey was informed, was 50 cases of soap in a 10-hour day. Likewise it was stated that in an 8½-hour day the girls would pack 42 or 43 cases of soap.

Nevertheless, the investigators thought it worth while to check up the records for the two periods, and found that production varied as follows:

AVERAGE NUMBER OF CASES PACKED PER HOUR AND PER DAY IN THE SOAP INDUSTRY, FOR A PERIOD OF 10 WEEKS.

Week.	Per hour.		Per day.	
	10-hour day.	8½-hour day.	10-hour day.	8½-hour day.
First.....	5	5.5	43.7	41.4
Second.....	5.2	5.6	42.1	43.5
Third.....	5.3	5.6	38.6	45.6
Fourth.....	5	5.6	49.7	44.8
Fifth.....	5.2	5.5	41.8	43.8
Sixth.....	5.3	5.8	40.9	45.8
Seventh.....	5	5.8	40.6	46.3
Eighth.....	5.4	5.8	46.2	45.8
Ninth.....	5	5.9	39.5	46.9
Tenth.....	4.9	5.8	48.3	36
Entire period.....	5.1	5.7	42.8	44.5

Production under the shorter day proved not only larger than under the 10-hour day but considerably steadier; both the hourly and the weekly output show smaller fluctuations. An apparent exception to this occurs in the tenth week of the 8½-hour day period, but this is explained as due to the fact that during that week a large quantity of soap was spoiled, and the packers were held back by shortage of material. It must be remembered that the piece rates for this work had been increased when the hours were cut, so that the workers were

not urged on to undue exertion by the desire of keeping up their former standard of earnings. Apparently the larger output of the second period is due solely to increased efficiency springing from shorter hours of work.

As a result of their investigation, the commission presented the following recommendations:

A. The Illinois Industrial Survey recommends the adoption of an 8-hour working day and a 48-hour working week for women in industry.

B. It recommends that this standard be applied to all industries covered by the present women's 10-hour law, including all office workers and excepting graduate nurses.

C. It recommends a law based on the hours of labor law at present in force, with the substitution of an 8-hour maximum for the present 10-hour maximum, a maximum for the week of 48 hours, and the additions of such provisions as may make the law easily enforceable.

D. It recommends legislative provision for the further study of night work by women, as well as the need for rest periods, regulation of time for luncheon, and other similar conditions of employment of women.

The survey also presents a bill embodying these points, which it recommends for passage.

#### UNITED STATES SHIPPING BOARD REPORT ON MARINE AND DOCK LABOR.

"Marine and Dock Labor: Work, Wages, and Industrial Relations During the Period of the War" is the title of a report just issued by the Marine and Dock Industrial Relations Division of the United States Shipping Board.<sup>1</sup> The report, which was prepared by H. B. Drury, was submitted to the Shipping Board as of December 31, 1918, by Robert P. Bass, then director of the division.

In his letter of submittal, Mr. Bass emphasizes the need of giving complete publicity to all facts bearing on the Government's part in industrial relations and this may be taken as the keynote of the report, which is a frank discussion of the policies of the Division of Marine and Dock Industrial Relations as well as a résumé of the work of the division.

To avoid a "period of chaotic and revolutionary readjustment" in this country, Mr. Bass would have the Government take the initiative in formulating a constructive industrial program, and by education or publicity:

1. Acquaint labor with the Government's activities and service to labor in the past;
2. Create in labor an appreciation of its joint interest with capital and with the Government in the problems of production;

<sup>1</sup> Marine and dock labor: Work, wages, and industrial relations during the period of the war. Report of the Director of the Marine and Dock Labor Industrial Relations Division, United States Shipping Board. Washington, 1919. 203 pp.

3. Give satisfactory assurance that labor will have a substantial voice in determining the distribution between capital and labor of the profits of production;
4. Promise to labor its reasonable share of any increase in production.

The program calls further for a joint determination (by employers and employees) of wages, hours, and conditions of work; the placing of great emphasis on labor's interest and responsibility in the process of production and a detailed analysis and full explanation of all the processes and problems of production, accompanied by explanations to each group of workmen as to the particular way in which they can facilitate and improve these processes.

The program is in accord in large measure with the recommendations of the Whitley committee on the relations of employers and employed in Great Britain; with the demands of British labor, and with the expressed labor policy of the present British Government. It is to be noted that the danger of a revolutionary readjustment, which Mr. Bass felt to be imminent in Great Britain, seems now to be averted by an earnest effort to make such a program effective.

The report itself is divided into three parts.

Part I deals with the adjustment of labor issues and is primarily a history of the Shipping Board's relations with labor through the National Adjustment Commission and the Marine and Dock Industrial Relations Division. One chapter is devoted to a "Future labor policy," in which it is recommended that permanent machinery be set up by the Shipping Board along the lines of the existing plan for the adjustment of peace-time matters affecting marine interests. Such a plan, however, is predicated on the assumption that the Shipping Board will continue to be an owner and operator of vessels.

Part II deals with marine and dock labor and is chiefly a description and statistical summary. Chapter V deals with marine and dock occupations; Chapter VI with the number and distribution of marine and dock employees; Chapter VII with employers' associations; and Chapter VIII with labor organizations.

Part III is a summary of wage rates and working conditions of marine and dock labor during the period 1914-1918.

The awards of the National Adjustment Commission and the agreement creating the commission form an appendix to the report.

#### WAGES OF MARINE AND DOCK LABOR.

The two tables following, taken from the report, show the percentage increases in the wages of marine and dock labor during the period 1914-1918 and the significance of the increases as compared with the increases in the cost of living during the same period.



PER CENT OF INCREASE IN WAGES OF MARINE AND DOCK EMPLOYEES, JAN. 1, 1919,  
OVER JULY, 1914.

Occupation.	Trans-Atlantic.	Atlantic and Gulf, coastwise.	West Indian, Mexican, Central and South American.	Pacific.
<i>Licensed officers.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
First mate.....	76.8	96.7	96.9	45.1
Second mate.....	118.9	124.8	125.4	51.9
Chief engineer.....	42.2	52.2	51.2	36.4
First assistant engineer.....	77.8	89.6	77.6	44.9
Second assistant engineer.....	111.4	81.8	81.0	46.6
Average.....	85.4	87.2	86.4	41.6
<i>Seamen.</i>				
Able seamen.....	164.2	147.0	145.7	81.8
Firemen.....	89.4	83.5	90.5	44.6

Occupation.	North Atlantic district.	South Atlantic district.	Gulf district.	Pacific district.
<i>Longshoremen.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Deep-water longshoremen.....	122.6	122.2	77.1	55.9
Coastwise longshoremen.....	161.0	79.4	53.3	61.1

Occupation.	New York harbor craft.					
	Tow-boats.	Ferry-boats.	Covered barges.	Lighters with hoists.	Coal boats, grain boats, and scows.	Car floats.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Officers.....	33.5					
Crew.....	60.4					
Officers.....		20.9				
Crew.....		42.6				
Captains.....			88.0			
Captains and engineers.....				86.5		
Captains.....					89.4	
Floatmen.....						72.3

INCREASES OR DECREASES IN THE PURCHASING POWER OF MARINE AND DOCK EMPLOYEES, JANUARY 1, 1919, AS COMPARED WITH JULY, 1914, AFTER ALLOWING FOR INCREASE IN THE COST OF LIVING, DECEMBER, 1914, TO DECEMBER, 1918.

[The plus sign (+) indicates an increase, the minus sign (−) a decrease.]

Occupation.	Vessels sailing from New York.			Vessels sailing from San Francisco.
	Trans-Atlantic.	Atlantic and Gulf, coastwise.	West Indian, Mexican, Central and South American.	
<i>Licensed officers.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
First mate.....	− 1.1	+10.0	+10.1	−11.1
Second mate.....	+22.4	+25.7	+26.1	− 5.6
Chief engineer.....	−20.5	−14.9	−15.4	−15.2
First assistant engineer.....	− .6	+ 1.0	− .7	− 9.9
Second assistant engineer.....	+18.2	+ 1.7	+ 1.2	− 8.9
Average.....	+ 3.7	+ 4.7	+ 4.3	−10.1
<i>Seamen.</i>				
Able seamen.....	+47.8	+38.1	+37.4	+13.0
Firemen.....	+ 5.9	+ 5.4	+ 6.5	−10.1
Average.....	+26.9	+21.8	+22.0	+ 1.5

Occupation.	North Atlantic district.	South Atlantic district.	Gulf district.	Pacific district.
<i>Longshoremen.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Deep-water longshoremen.....	+24.5	+27.5	+ 2.7	−3.1
Coastwise longshoremen.....	+46.0	+ 2.9	−11.1	+ .1

Occupation.	New York City harbor craft.			
	Towboats.	Ferry-boats.	Covered barges.	Lighters with hoists.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Officers on harbor craft.....	−25.3	−32.4	+5.1	+4.3
Crew on harbor craft.....	−10.3	−20.2		

Of particular interest at this time because of the place that this country may take in the world's shipping is the chapter in the report devoted to a comparison of American and foreign wage rates with especial reference to the Seamen's Act. The information for foreign vessels, however, is not sufficiently comprehensive to give a clean-cut comparison and is almost altogether lacking in the case of vessels not clearing from American ports.

Much of the information contained in the report is from secondary sources, but its compilation and analysis has made it much more useful.

## LEGAL INTRODUCTION OF THE 8-HOUR WORKING DAY IN GERMANY.

In a manifesto<sup>1</sup> published on November 12, 1918, the Council of People's Commissioners, in addition to suspending martial law, abolishing all domestic-servant laws, special laws relating to agricultural workers, the auxiliary national service law, and the censorship of the press, and granting full freedom of speech, association, assemblage, combination, religious exercise, and amnesty for all political crimes, also held out the promise that a maximum 8-hour workday would be established by law not later than January 1, 1919.

Even before this promise had been redeemed, the employers' associations included in the Federation of German Employers' Associations on November 15 concluded a comprehensive agreement with the workers' and salaried employees' central organizations which, among other things, provided for a maximum 8-hour workday and thereby brought about a momentous change in the conditions of labor. Dr. Tänzler, the director of the Federation of German Employers' Associations, in an article in the *Wirtschaftszeitung*<sup>2</sup> says that "though he can not confess great anxiety as to the effects of this step, it must be borne in mind that it is a period of demobilization. The patriotic duty of employers is to find employment for returning soldiers. As orders are few, this can only be done by shortening working time so that as many workers as possible may find employment. It must not be forgotten that the prolonged war has done much to weaken the physical powers of the population. The question whether an 8-hour day is feasible thus passes from theory into practice, and the result will have to be abided by. It was clear when the agreement was concluded that Germany could not be the only nation to adopt this measure without being much handicapped in competing with other nations. Further efforts by the Labor Party must, therefore, be directed toward inducing the other industrial countries to follow Germany's lead."

According to the *Welthandel*,<sup>3</sup> German iron exporters are already experiencing the effect of the shorter working-day and higher wages. In consequence of these they have been compelled to raise prices, and now find their English competitors underbidding them in Dutch markets.

Even sooner than had been promised the German Provisional Government gave legal force to the 8-hour workday. This was effected through the following order regulating the hours of labor of industrial workers, issued on November 23, 1918, by the National Office for Economic Demobilization:<sup>4</sup>

<sup>1</sup> *Berliner Tageblatt*, Berlin, Nov. 13, 1918. Morning edition.

<sup>2</sup> *Wirtschaftszeitung*, Berlin, Nov. 29, 1919.

<sup>3</sup> *Welthandel*, Berlin, Nov. 20, 1918.

<sup>4</sup> *Deutscher Reichsanzeiger*, Berlin, Nov. 27, 1918.

In pursuance of the decree of November 12, 1918, of the Council of People's Commissioners as to the creation of a national office for economic demobilization, the following order with reference to the regulation of the hours of labor of industrial workers is herewith issued:

ARTICLE 1. The regulation applies to industrial workers in all industrial establishments, inclusive of mining, in Federal, State, and communal establishments even if they are not operated with a view to profit, and in agricultural subsidiary establishments of an industrial nature.

ART. 2. The regular daily hours of labor, exclusive of rest periods, must not exceed eight. If by agreement the working hours are curtailed on the afternoons preceding Sundays and holidays, the time thus lost may be made up on other working days.

ART. 3. In the case of general exceptions to the foregoing regulations made necessary in industries connected with transportation and communication, including the railways and post and telegraph service, and called for by existing conditions agreements must be arrived at between those in charge of the establishments and the workmen's organizations. Should such agreements not be concluded within two weeks, the right to issue further orders is reserved.

ART. 4. In order to introduce a regular weekly change of shifts in establishments whose nature does not admit of any interruption of operation, or in which at the present time continuous Sunday labor is necessary in the public interest, male workers over 16 years of age may once within three weeks, work a maximum of 16 hours, inclusive of rest periods, provided that during these three weeks they are twice granted an uninterrupted rest of 24 hours at a time.

ART. 5. Notwithstanding the general regulations of the Industrial Code, female workers over 16 years of age in establishments with two or more shifts may be employed up to 10 p. m., provided that, after quitting work, they are given a rest lasting at least 16 hours. In such cases, in place of a noon rest of one hour, there may be a rest period of only half an hour, which is to be counted as working time.

ART. 6. The foregoing regulations shall not be applicable to temporary emergency work, which has to proceed without delay.

ART. 7. If, in establishments whose nature does not admit of any interruption, or in which unrestricted operation is necessary in the interests of the public, the required number of suitable workmen is not available, a regulation deviating from the foregoing may be approved provisionally by the competent factory inspection official, or, in the case of mining establishments, by the district mining inspector. This must be preceded by a request on the part of the employer, and should no agreement have been concluded between the employers' and workmen's organizations, a declaration of consent on the part of the workers' committee, or, should no such committee exist, on the part of all the workers in the establishment. Should more comprehensive agreements between employers' and workmen's organizations with respect to exceptions to the limitations of employment of industrial workers be arrived at in establishments designated in this article, the officials of the factory or mine inspection service are authorized to permit further provisional exceptions from the protective labor regulations. Immediately after giving their approval the said officials shall call the attention of the proper employment offices to the shortage of labor in the establishments in question. The competent commissioner of demobilization must also be informed of the permits granted and he is authorized to call upon the officials to revoke such permits.

ART. 8. The commencement and termination of the daily hours of labor and rest periods are, so far as they have not been regulated by collective agreement, to be fixed in accordance with the foregoing regulations by the employer in agreement with



the workers' committee, or should no such committee exist, with all the workers in the establishment, and to be published by posting in the establishment.

ART. 9. The officials of the factory and mine inspection service are charged with the enforcement of the foregoing regulations. For this purpose they are authorized to negotiate with the workers' committees in the presence of the employer, or with either party alone, and to summon the workers' committee.

ART. 10. Violations of these regulations or of orders issued in pursuance of them shall be punished by a fine up to 2,000 marks (\$476), or, in case of inability to pay the fine, with imprisonment up to six months.

If the offender at the time of the violation has already been punished for a violation in accordance with paragraph 1, and the violation has been premeditated, the penalty may be a fine of between 100 and 3,000 marks (\$23.80 and \$714), or imprisonment for a term not exceeding six months.

ART. 11. Existing imperial and State laws and regulations issued in pursuance of these laws shall be applicable in so far as they do not contravene the foregoing regulations.

ART. 12. The present order comes into force on the day of its promulgation.

According to the *Deutsche Allgemeine Zeitung*,<sup>1</sup> the introduction of the eight-hour day has led to a considerable increase in hourly wages in the building trades, amounting to 25 per cent in districts where the normal working day was 10 hours, and correspondingly less where the working day was shorter. The Central Committee of the Joint Council of Employers' and Employees' Associations has determined that the increased wages shall be payable as from November 30. Where wages arbitration already exists it is to apply to this question. Existing wage agreements between employers' and workers' organizations remain in force until the end of March, 1919; all interference by unauthorized bodies in the system of agreements is forbidden. Builders who accepted contracts before November 30, 1918, may demand special compensation for the increase in wages from the awarders of the contracts.

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<sup>1</sup>*Deutsche Allgemeine Zeitung*, Berlin, Nov. 29, 1918.

## MINIMUM WAGE.

### MINIMUM WAGE IN THE DISTRICT OF COLUMBIA.

Under the terms of the Keating-Trammel bill, which became a law in September, 1918, a minimum wage board for the District of Columbia was appointed, October 19, 1918, composed of three members: Mr. Jesse C. Adkins, attorney, representing the general public; Mr. Joseph A. Berberich, vice-president (now president) of the Merchants' and Manufacturers' Association, representing the employers; and Miss Ethel M. Smith, secretary of the Women's Trade-Union League, representing labor. Mr. Adkins was elected president of the board, and Miss Clara Mortenson was secured as secretary.

The board's first duty, under the terms of the law, was to make a survey of the wage conditions of women in private employ in the District. This showed about 15,600 women industrially employed, omitting Government employees, workers in the telegraph and telephone services, and employees of railroad and express companies.

The numbers in specified industrial groups were approximately as follows:

In retail stores.....	7,000
Restaurants, hotels, and personal service establishments.....	2,700
Manufacturing and mechanical industries.....	4,500
Office work.....	1,400

The board selected the printing and publishing industry as the first to be dealt with, and made a preliminary survey of its conditions. This industry in the District employs about 700 women, of whom 47 per cent were receiving less than \$11 a week, while 76 per cent received less than \$15 a week. The interested groups were invited to nominate candidates to represent them upon the conference which should "investigate, consider, and recommend to the minimum wage board itself the standard of living and the wage which should be fixed as the minimum in that industry," and from the nominees the board chose three representatives each for the employers, the employees, and the public. In addition to these nine, one member of the board was required to serve on the wage conference, and for this purpose the labor member of the board was chosen. The other members of the board attended one or more meetings of the conference, though not required by law to do so.

While the process of securing the members of the conference was going on the board had obtained from the United States Bureau of Labor Statistics figures showing the cost of living in the District of Columbia for a woman without dependents. These were based on a study of actual budgets of 137 working women, brought down to January 15, 1919. Taking these as a basis, the board announced that \$16 a week is the minimum cost of living for a woman in the District. The board, however, has no power to fix a minimum wage of its own initiative; it can act only upon recommendations submitted to it by a conference appointed to consider a specific industry, so that this announcement of the board carried with it no binding force.

The conference promptly organized and set about determining the minimum rate which it should recommend. The representatives of the public and the employees each prepared a detailed budget, showing what, in their opinions, was necessary for decent and healthful living, excluding all unnecessary expenses. These were prepared separately, but when they were brought before the conference it appeared that while the employees had fixed on \$17 per week the representatives of the public had decided on \$17.15. The representatives of the employers did not present a budget, but fixed on a lump sum, \$14 per week, which they considered sufficient.

Four meetings were held, at which the different parties went over their figures carefully, seeking an adjustment of the differences. All had at the outset accepted the figures given by the Bureau of Labor Statistics for room and board—\$9 a week. The representatives of the employers suggested that this might well be reduced to \$7, since it represented the wartime figures, and since now that hostilities are over board and rent are coming down. No conclusive evidence that this is the case was presented, however, and lacking such evidence the conference as a whole was not willing to make a reduction here. The item of clothing, which had been fixed by the public's representatives at \$4.11 per week, and by the employees' at \$3.84, was next approached. The employers contended that there were two reasons for reducing these figures—sufficient allowance had not been made for the extent to which the articles purchased in one year would last over into the next, and there was every reason to believe that the price of clothing would soon fall, perhaps very considerably. After much consideration this item was cut down to \$3.35 per week. Car fare for any purposes except going to and from work was omitted, and various small reductions in other items were made. Early in April an agreement was reached, and the following report was submitted to the board:

The members of the conference on the printing, publishing, and allied trades do hereby respectfully submit the following report:

The conference met for organization on March 4, 1919, and continued to meet weekly until April 8, 1919. After consideration of the facts concerning cost of living presented by the board, supplemented by additional evidence, the conference unanimously voted that \$15.50 per week was the minimum amount required to meet the necessary cost of living to self-supporting women in the trades under consideration and to maintain them in health and protect their morals. The items comprised in this amount are:

	Per week.
Room and board.....	\$9.00
Clothing.....	3.35
Laundry.....	.75
Sickness, dentistry, oculist.....	.50
Amusements.....	.20
Vacation.....	.25
Savings and insurance.....	.35
Church and charity.....	.10
Organizations.....	.10
Self-improvement.....	.10
Car fare.....	.60
Other incidentals.....	.20
Total.....	15.50

The conference therefore submits the following wage determinations as a result of its study and deliberations:

1. The wage to be paid to any female of average ordinary ability who has had one year's experience in the printing, publishing, and allied trades shall be not less than \$15.50 per week.
2. The wage to be paid to any female of average ordinary ability who has had more than nine months' and less than one year's experience in the printing, publishing, and allied trades shall be not less than \$12 per week.
3. The wage to be paid to any female of average ordinary ability who has had more than six months' and less than nine months' experience in the printing, publishing, and allied trades shall be not less than \$11 per week.
4. The wage to be paid to any female of average ordinary ability who has had more than three months' and less than six months' experience in the printing, publishing, and allied trades shall be not less than \$9 per week.
5. The wage to be paid to any female of average ordinary ability who has had less than three months' experience in the printing, publishing, and allied trades shall be not less than \$8 per week.

This is a higher minimum than has as yet been fixed anywhere in the United States, the nearest approach to it being the \$13.20 per week which was fixed by the Washington Industrial Welfare Commission as the lowest wage which might, during the period of the war, be paid to any woman, aged 18 or over, "in any occupation, trade, or industry throughout the State."

Under the law prevailing in the District of Columbia, before a minimum wage can be adopted by the board, a public hearing, advertised for a period of 30 days, must first be held, so that the above rates can not yet be regarded as definitely accepted. Their advocates, however, feel that the prospect for their adoption is very good,



since the conference was unanimous in its recommendations, and since the employer member of the board, who was present when the rates were decided upon, also assented to them.

If, after the public hearing, the rates are authorized by the board, a further period of 60 days, designed to permit employers to adjust their pay rolls, must elapse before they become obligatory. This will bring them into operation in all probability at some time in August, 1919. If adopted, the rates are mandatory, and the failure of any employer to pay them renders him liable to fine or imprisonment.



## WOMEN IN INDUSTRY.

### EMPLOYMENT OF WOMEN IN ACETYLENE WELDING.<sup>1</sup>

BY HELEN G. FISK.

#### HISTORY AND NATURE OF ACETYLENE WELDING.

Oxyacetylene welding not only is one of the newer occupations for women, but also is itself a young industry. So long as the use of wrought iron has existed, welding by heating the metal to a plastic state and hammering has been common. The inclusion under the term "welding" of the uniting of two metals by fusion without recourse to pressure is, however, very modern.

Oxyacetylene welding is the process of uniting metals through fusion by means of a gas flame, the heat of which is so great as to reduce the metal to a molten state. The beginning of oxyacetylene welding in its present application dates back only to 1895 and the first really practical and safe torch was put out in 1903. Since 1905 the industry has grown rapidly in the United States as facilities for obtaining supplies of oxygen and acetylene have improved.

Acetylene is produced by the reaction between calcium carbide and water. The user may manufacture the acetylene in automatic generators which feed calcium carbide to water or he may buy cylinders containing acetylene dissolved in acetone usually at a pressure of about 250 pounds per square inch.

In large establishments oxygen may be generated by either the electrolytic or liquid air process, but it is more commonly procured in cylinders at a pressure of about 1,800 pounds per square inch. As both gases are supplied at much higher pressure than they are used, gauges and regulators are provided to control the pressure of gas in the tanks and the feeding into the torch where the two gases are mixed and ignited at the tip. The temperature of the flame is 6,300° F. (3,482° C.) when it is neutral—that is, when no excess of either gas is present. The very speedy welding made possible by this

<sup>1</sup> Prepared by the Women's Branch of the Industrial Service Section of the Ordnance Department. Inspections were made in the plants of ordnance contractors employing women for this work. Questionnaires were sent to companies known to be employing women, in November, 1918, requesting information as to numbers employed, wages, and hours. A total of 1,134 woman welders was reported from 38 companies, 1,033 of these women being engaged entirely on war work. Leading welding authorities were consulted regarding training and the scope of women's work, and the makers of welding apparatus and the National Board of Fire Underwriters, regarding hazards. Much valuable assistance was given by the editors of the *Welding Engineer* and *The Journal of Acetylene Welding*.

high temperature, together with the fact that the equipment is easily transportable, has made the oxyacetylene process of great value in repair work on all sorts of metal parts and machinery.

#### WELDING AND THE WAR.

Women entered the welding field at a time when it was being rapidly enlarged and changed by the necessities of war production. The manufacturers' problem included not only the adjustment of the process to a new class of labor but also changing welding methods and equipment to fit them into separate stages of a continued process of manufacture.

The great need for conservation of metal has made it necessary and profitable to repair much broken machinery which would have been scrapped heretofore. The demand for good welders, always greater than the supply, has been enormously increased. Probably 1,400 welders were engaged in salvage work alone behind the line of Pershing's forces in France, a larger number was needed for repair work in this country, and still others were required to carry on welding processes in the course of manufacture of ships, airplanes, and munitions.

#### EXTENT AND CHARACTER OF WOMEN'S WORK.

As was the case in many other occupations, the increased demand was met in this country, as well as in England and France, by the introduction of women into the industry. The need for an extra supply of welders was recognized in England early in the war and short welding courses for women were immediately instituted with decided success. Two hundred and twenty were trained and placed in the first year, and the welding courses in many of the technical schools are now open to women. English women have done all types of welding with marked success.

In the United States woman welders have not been given as many or as difficult types of work as have the English women, but their field of work has nevertheless been varied.

It is the consensus of opinion that women have been most successful in the lighter grades of work, such as are centered in the airplane manufacturing around Detroit. A welding engineer says in comment on this work:

They are rendering excellent service, and by reason of their greater dexterity in handling small work, they have opened for themselves and their sex a permanent field.

On the other hand, it is agreed that work from which very heavy lifting can not be eliminated is unsuitable for women.

The estimates of welding authorities place the number of woman welders in this country at from 1,000 to 1,500 or more. Very few



of these are sufficiently skilled to do general high-class welding repair work. Neither has it been considered advisable to employ women for very large work such as the welding of stationary boilers and engines. The necessity for preheating this large work makes it unsuitable for women, as is any occupation involving intense heat or heavy lifting. The shipbuilding industry has not used woman welders, since this class of work requires a high degree of strength, agility, and endurance. At least 500 women have welded on munitions for our Army. Many more have helped to make our airplanes.

The large companies making airplane motors and parts have been highly pleased with the results of employing women for this work. One manufacturer says:

I found that on about 50 per cent of our work that women are equal to men, on 25 per cent women are superior to men, and on the other 25 per cent men are superior to women. You will always notice that where women take an interest in their work you can depend upon 100 per cent efficiency. This is a valuable point to remember, as in welding there is an excellent chance to camouflage, as it is impossible to tell a perfect weld by visual inspection.

#### TYPES OF WELDING.

*Welding of drop bombs.*—A good example of the simplest type of welding done by women on fairly heavy material is the welding of the seams of aerial demolition bombs. These bombs are loaded with high explosive and dropped from airplanes to cause explosions on contact.

The nose end of the bomb "shell" or casing is of fairly heavy steel and must be welded to the rear end of drawn steel. A rod is placed through the center of the shell, forming an axis on which it revolves when placed on bearings of a stand which is adjusted to the height of the worker. The shells are brought to the welders and adjusted for them by men helpers.

The welder holds the wire or filler rod in her left hand, and the torch in her right. She must light the torch, turning on both the oxygen and acetylene and regulating the flow until a neutral flame is secured. The inner white flame should be rounded to the shape of a tiny gas mantle and the torch held so that the tip of the inner flame, the hottest point, will just come in contact with the metal.

The technique of handling the torch, including the manipulation of the cocks and the different movements of the flame over the metal, varies both with the material and the style of torch. The chief object is to make a weld which goes deep enough to stand the strain and not to concentrate the flame too long on the thinner metal so as to burn holes.

The seam must first be "tacked" in four places, that is, the edge melted together at four points on the circumference of the bomb so as to prevent the edges from slipping apart. The operative must

then keep the tip of the small inner flame moving over the seam. As the two edges are melted, the end of the wire is placed under the flame and the resulting additional drop is spread out over the seam by the next movement of the torch.

The welding of the seams of the incendiary drop bombs is a very similar process but requires somewhat greater dexterity and skill because the metal is thinner. It therefore burns through more quickly (and a hole or a poor weld is not so easily repaired) than in the heavier work, where a smooth surface is not so important.

*Welding on motor parts.*—Probably the most highly skilled welding operations upon which women are generally engaged are those in the manufacture of motor parts, such, for instance, as the different steps in welding the pressed steel water jacket into shape and attaching it to the cylinder of the Liberty motor.

The first of these is tacking the seam of the water jacket in six places. The water jacket must be adjusted in a clamp so that when the heat is applied the two edges of the seam will not spring so close together as to make the diameter of the water jacket too small. The operative must make three or four adjustments of the clamp for each seam. One woman does this tacking. Another welds the seams together. Both operations require some skill, both because the rolled steel of which the water jacket is made is very fine and thin and therefore easily burned, and because of the necessity of having the diameter of the jacket exactly correct. One thirty-second to three thirty-seconds of an inch leeway may be allowed in tacking the seam, according to whether the jacket has been annealed or not before welding.

Other welds on the motor cylinder are those of the edge of the pressed steel water jacket onto the bottom of the cast and machined steel cylinder and of the jacket to the valve stem of the cylinder. These are similar to the one just described.

*Machine welding.*—The acetylene welding machine is used for welding seams of straight tubing. The set-up consists of an oxy-acetylene torch held rigid so that the inner cone just touches the seam as the tubing is passed through under the torch. The operative tends two machines, simply feeding in the tubing and making any necessary adjustments of the flame. The work is easy but necessitates almost constant standing.

#### CHANGING SHOP METHODS.

The changes in welding equipment and methods which have been introduced to make possible the employment of women in the occupation are for the most part the same which are necessitated by the use of any semiskilled labor for these operations. Where the problem is the maximum number of welding inches three considerations are of

prime importance: Good equipment, economy of motion, and the elimination of fatigue.

*The use of conveyors* has eliminated the lifting and carrying of parts and made available all of the time of the operative for actual welding. The work is rendered at the same time much less fatiguing.

*Revolving cradles* to hold the work have obviated strained and inconvenient positions on the part of the worker and given her more time to cultivate speed and dexterity in handling the torch and wire.

*Adjustable chairs*, by increasing comfort and convenience of position and thus reducing fatigue, are regarded as a factor in satisfactory production.

*Standard equipment.*—A defective or dirty torch will seriously delay production. Every time the tip becomes clogged so that the flame flashes back into the head of the torch it means not only a loss of some minutes in cooling the overheated torch, cleaning it out and readjusting the flame, but a further delay in reheating the weld. Much time has been saved by providing improved equipment and by carefully instructing the workers in the proper use and care of the torch.

A variable oxygen supply is in the same way a frequent cause of production delays, by making necessary additional readjustments of the torch. Where each torch is dependent upon a single oxygen tank, the pressure of the gas varies with the amount of oxygen remaining in the tank. By attaching all the oxygen tanks to one manifold pipe system, a more even flow of oxygen is secured.

The use of women in welding has hastened the consideration of all these points, through the desire to insure the suitability of the occupation for women, but the same methods will secure better production from men as well.

#### WORKING CONDITIONS.

*Shop construction.*—Working conditions for women welders vary greatly with the individual concern. Better conditions are generally found in the larger plants where the welding process can be segregated from the other shop processes. The confusion of a noisy shop is particularly troublesome to the welder, not only because she must concentrate her attention very closely upon her work, but also because the dark goggles shut out the sight of everything but the flame, the wire, the spot of white-hot molten metal at the weld, and the larger area of red-hot metal surrounding it.

Adequate fire protection measures are obviously of increased necessity in a shop where welding is done. Good shop ventilation is also especially important both on account of the unpleasant odor of acetylene and to counteract the effect of working with such intense heat.



*Hours.*—Data concerning hours and wages were available from 11 of the 38 companies known to be employing women as acetylene welders. This data affects 369 of the total 1,134 women known to be so employed.

An 8-hour day was in force in only two of the plants. One company maintained a 10-hour day, and the others were equally divided between 9 and 9½ hour days. It is important in work demanding as close attention as welding that the welder have occasional let-ups in her work. Where the welder must wait for each piece of finished work to be inspected and taken off the cradle and the next piece of work put on, a recurring rest period is created. Where this is not the case it has been found advantageous to introduce rest periods of 10 minutes at the end of each two hours of work.

*Wages.*—The lowest beginning rate prevalent in these 11 companies was 22½ cents per hour, which was the rate in force in three plants. The other companies paid a beginning rate of 25 to 30 cents per hour.

Experienced welders are usually paid a piece rate. The average hourly earnings for pieceworkers varied from 25 to 70 cents an hour. The majority of workers received 45 cents or over. It is doubtful, however, on account of poor timekeeping and irregular work whether a majority of these pieceworkers earned as much as \$25 a week.

#### TRAINING.

With the sudden demand for large numbers of welders, the old, slow methods of training by apprenticeship had to be abandoned. The Navy, Army, and the Bureau of Aircraft Production all started welding courses, as did also the engineering and automobile schools of the country. Shop training of more or less formal character has been given to the larger number of women who have been engaged in the semiskilled work.

*Time required.*—It is the unanimous opinion of men responsible for the training of welders that there is in every group a certain number of persons who can never master the art of welding. These should be weeded out in the early part of the training course.

The training time varies greatly with the individual. Experts say that it takes years to produce a really good all-round welder, in spite of the fact that a number of 30-day courses are offered at present.

The shop training for one operation on one metal is, of course, a much simpler and shorter process than general welding training. It is difficult, however, even to state a minimum training time for one operation, since individual adaptability to the work varies so greatly. Probably several days should be devoted to training for such an operation as the welding of demolition drop bombs. For the more



complicated operations on finer metal, such as the welding of motor parts, different companies give the necessary time as from one week to three weeks. Manufacturers agree on three points: The time allowed must vary with the individual; training time for women need not be longer than for men and may often be shorter; training time is materially shortened by means of a training room separated from the shop.

*Separate training rooms.*—The separate training room has proved more satisfactory than training in the regular shop. It gives an opportunity for the welder to become accustomed to the apparatus and to work away from the noise and confusion of the shop, and enables her to make much more rapid progress. By making use of a separate set of apparatus, she may take her time in learning methods of work without holding up the production schedule in the shop.

The separate training rooms not only make easier a careful weeding out of unpromising pupils, but also permit a better choice of the teacher. The best welder often is not a good teacher. The foreman who can manage his shop excellently may not be able to give clear explanations of how or why a given operation should be performed in the prescribed manner, and it is in the clear understanding of instructions and the reasons back of them that the most important foundation of good training lies.

*Points to be covered.*—All welders, irrespective of the particular work they are to do, should first be made thoroughly familiar with the equipment and apparatus in the shop. As a general thing it has been found better for the women not to regulate the pressure of the gas until they are thoroughly expert welders, but they should know the use and proper regulation of every part of the apparatus in order to avoid danger of accidents from careless handling.

The introduction of the workers to the equipment in most training rooms includes careful instruction in just how to adjust the flame and keep the torch and tip in good working order. A poorly adjusted flame may entirely spoil what would otherwise be a good weld.

The welder is also taught something of the material on which she is working—for instance, the difference between pressed and cast steel in their reaction to the flame—and is carefully instructed just how to hold the torch so as to get the maximum of heat directed at the most important part of the weld and to save unnecessary motions.

It is found generally more satisfactory to start training on scrap metal. The length of time before the operative is put on direct production varies with the class of work, welds on finer metal

requiring longer training. From the training room the welder can go directly into quantity production in the shop without causing loss from spoiled material.

*Cost of training.*—Few data have been accumulated on the cost of training women. This must vary widely with methods adopted and the degree of skill aimed at. One manufacturer who employed women for welding on aerial bombs estimated the cost of training at \$80 for each worker.

#### HAZARDS AND PROTECTIVE MEASURES.

The main accident hazards are in the possible explosion of the gas tanks and in burns from contact with the torch.

*Explosions.*—Careful installation of the equipment and detailed instruction of the workers for its manipulation will greatly reduce the danger of explosion. The operatives must also be warned not to bring anything containing carbon in contact with oxygen or to use any oil or grease on the fittings of the apparatus. The National Board of Fire Underwriters states:

The acetylene and oxygen gas mixture is highly explosive, but with modern appliances, if properly kept up, there is little danger from this.

*Burns.*—Three precautions against burns are of primary importance. They are:

Allowance of sufficient space between set-ups so that a carelessly held torch will not endanger the next person.

Careful instruction of the workers in the mechanism of their apparatus, and insistence upon care in its use.

Provision of proper protective clothing and orders to insure its being worn.

Women should wear uniform one-piece overalls and close-fitting caps. Gauntlet gloves should be worn to protect the hands from the heat of the torch and metal worked on, and from the flying sparks.

Mr. George W. Booth, chief engineer of the National Board of Fire Underwriters, says:

The hazards of the occupation are principally the possibility of severe burns and danger to eyesight. In welding, whether acetylene or electric, it is necessary for the user to wear a mask, completely covering the face, with colored glass to protect the eyes against the excessive light. At times there is a spattering of small particles of molten metal, which would endanger the face, if not protected, and also the hands, which must be well gloved with special gloves of a heat-resistive character.

The wearing of a mask as above recommended is generally required only for electric welders, and would seem an excess of caution for the lighter types of acetylene welding which women have most commonly performed.

One company has found canvas gloves more satisfactory if the thumb and first two fingers are reinforced on the under side or if the

whole palm is of leather. For heavy work some sort of heavy apron of leather or stiff canvas or asbestos is an advisable precaution to prevent burning holes in the uniform.

The chief health hazards appear to lie in the exposure to sudden changes of heat and cold and in the possibility of eyestrain.

*The heat* of the operation is intense—the torch is at 6,300° F. (3,482° C.)—but it is localized and except on hot days is not complained of. It does not affect the worker as unfavorably as the heat of a laundry. If there is exposure to sudden changes or if the work is done in a cold draft, harmful results are likely to follow. Workers who went from welding to a cold rest and lunch room took cold very easily.

*Eyestrain* is reduced by the use of dark glasses, without which the operative should never be allowed to do any work. The goggles should be as light weight as possible and preferably with an elastic band to fit around the back of the head, rather than with steel bows to hold the goggles in place.

Although some manufacturers insist that the welder who wears goggles is not subjected to eyestrain, it is more generally admitted that there is danger even with this protection. The following statement is made by the engineering department of one of the leading companies manufacturing oxyacetylene apparatus:

Acetylene welding, or any other work in strong light, should not be undertaken except by people with thoroughly normal eyes. Any original weakness or irritation will be enhanced to some extent by constant exposure to strong light. On the other hand, experiments conducted for us by Prof. M. F. Weinrich, of Columbia University, have shown that, with properly tinted spectacles or goggles, no injury will occur to the eyes of the operator originating from a strong light.

*Gases.*—Formerly there was considered some hazard to the user of acetylene from gas poisoning, but with the present acetylene-generating machines the impurities present are believed to have been removed and there is little danger from this source.

#### FUTURE SCOPE OF WELDING AS AN OCCUPATION FOR WOMEN.

Despite the hazards of the occupation, welding has been a very attractive field for women. Training for the less skilled operations may be easily and quickly obtained. The work gains in interest, and is always presenting the worker with opportunities to increase her skill. The pay received is considered good.

The future scope of the welding field for women is hard to predict. Welding as an industry is only in its infancy and the demand for welders therefore may not be materially decreased with the cessation of war production. Men will always be preferred for many sorts of welding and perhaps for all classes when the supply of men and women is equal, but women have demonstrated that they are better suited to the lightest sorts of welding than men. Manufacturers who



had a force of woman welders for war work did not give them up for men unused to the shop and methods, but made arrangements to shift their woman welders from war to peace production. There seems no reason why women should not enter the field of general automobile repair work and skilled welding if the demand for welders continues ahead of the available supply of men welders.

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#### CASE OF WOMAN STREET CAR CONDUCTORS IN CLEVELAND.

In the MONTHLY LABOR REVIEW for January, 1919, an account was given of the circumstances leading up to the strike of the men employed by the Cleveland Street Railway Co. against the employment of women as conductors, the issuance by the National War Labor Board of a recommendation that the women should be dismissed, and the settlement of the strike on that basis, it being agreed that the dismissal of the women should not be obligatory before March 1, 1919.

The settlement was at once followed by vigorous protest from women's organizations all over the country against its terms, and particularly against the recommendations issued by the War Labor Board. The Women's Trade Union League took a particularly active part in organizing meetings of protest and sending in resolutions criticizing the action of the board and calling for a hearing for the woman conductors. It was urged that they had been promised a hearing, which they had never been given; that the recommendation for their dismissal had been issued without giving them any opportunity to present their claims, and that in issuing this recommendation the board had violated its own interlocutory order of November 29, 1918. It was pointed out that no reason, except the demand of the men, had been given for the dismissal of the women, and that it was a dangerous precedent to exclude women from work which they were doing to the satisfaction of their employers, the public, and themselves merely because men employed in the same occupation demanded their discharge. It was not even a general demand from the men in the same occupation, for in other cities women and men were working amicably together on the cars, and the national union of the street and electric railway employees had authorized and advised the admittance as members of the union of women employed in street railway work.

As a result of these protests and representations the National War Labor Board announced that it would give the women a hearing. An early date was set, but unfortunately, through no fault or oversight of the women, it became necessary to postpone the hearing for several months. In the meantime the 1st of March arrived, and all



the women still employed as conductors by the Cleveland Street Railway Co., 64 in number, were dismissed in a body. Two weeks later, March 14, their hearing was held in Washington, the former joint chairman of the board, Mr. Frank P. Walsh, appearing on behalf of the women.

The women asked for reinstatement, claiming that they had been engaged with the understanding that they should be dismissed only for cause, and that no cause had been shown. They brought forward, briefly, testimony showing the healthfulness and safety of the work as compared with occupations in which they had been engaged before entering the street-car service. They testified that they had not in any way underbitten or undercut the men, but had entered on precisely the same terms, had taken the undesirable runs at first, and had worked up to "seniority rights," exactly as the men could do. As to keeping returned soldiers out of jobs, they presented figures from the company's records showing that every returned soldier who had applied for reinstatement had at once received his old position, and that the service could to advantage reabsorb every man who had left it to go to war without displacing a single woman.

The men employees presented no testimony, but, through their representative, denied the jurisdiction of the National War Labor Board in the case.

On March 17 the board handed down an award. The first part of this rehearses the circumstances of the case up to and including the latest hearing, points out that the joint chairmen had had no part in the action of the board which resulted in the issuance of the recommendation of December 3, 1918, and after summarizing the arguments of the women, continues:

After a full consideration the board as now constituted feels that an injustice was done to the women applicants in making the order of December 3, 1918; that it was made upon the application of the mayor of Cleveland and in the absence of the women who were affected and who had not understood that the issue was before the board and on its merits. In other words, the women did not have their day in court. That requires that this board should reestablish the status which existed before the order was made. A ruling was made by the joint chairmen in Detroit that, under the contract which bound the company and the men in that case, the time had arrived when the company was not justified in continuing the employment of women, because such employment was limited by the contract to the existence of the necessity for their employment, but that the women already employed and in the service should continue there until in the ordinary course their employment should cease either by voluntary withdrawal or by discharge for cause or other sufficient reason. We feel that the principle which obtained in the Detroit Street Railway case should apply here. The only question before us is whether these women who were discharged on the 1st of March should have been discharged by reason of any contract between the company and the men. We think the terms of their employment justified them in believing that their employment would continue until normally ended by their voluntary withdrawal or the failure on their part to render proper service or other sufficient reason.

We have drafted this opinion in accord with the resolution of the board, as follows, to wit:

That the matter be referred to the joint chairmen, with directions to frame an order declaring the similarity between this and the Detroit case, approving the principles held in the Detroit case, and on the basis of that case directing that the 64 women heretofore discharged by the company be reinstated to their employment.

For these reasons the present order will be that the order or recommendation of December 3 last be set aside, and that the company be directed to restore these women discharged on the 1st of March last to the position that they had in seniority and other privileges.

WM. H. TAFT,  
BASIL M. MANLY,  
*Joint Chairmen.*

MARCH 17, 1919.

Following the publication of this award, the daily papers of March 19 carried the following item:

MARCH 18.

The Cleveland Railway Co. will abide by its agreement with the city and the carmen's union not to employ women conductors after March 1, notwithstanding an order of the War Labor Board directing the reinstatement of 64 conductorettes, John J. Stanley, president of the company, announced late to-day.

Under the agreement a three-day street car strike was settled, and Mr. Stanley said he could not reinstate the women and be a party to another strike.

Mr. Stanley himself had no criticism to make of the women, and would have retained them but for the opposition of the men. He stated his position in a signed communication to the War Labor Board as follows:

If your honorable board can prevail upon Division 268 of the Amalgamated Association of Street and Electric Railway Employees of America to agree to the reinstatement of the women conductors, I shall be very glad to order their reinstatement.

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#### STANDARD WORKING CONDITIONS FOR WOMEN IN CALIFORNIA LAUNDRY AND MANUFACTURING INDUSTRIES.

On January 7, 1919, the Industrial Welfare Commission of the State of California issued an order (I. W. C. Order No. 4 amended) effective March 7, 1919, prescribing standard conditions of employment for female workers in laundries and manufacturing industries. With the exception of paragraphs 4 to 16, inclusive, which set forth in somewhat minute detail requirements as to types, arrangement, equipment, etc., of toilet rooms, the text of the order is as follows:

No person, firm, or corporation shall employ or suffer or permit any woman or minor to work in any factory in which the conditions of employment are below the standards set forth hereinafter; provided, however, that in cases where, in the opinion of the Industrial Welfare Commission, after due investigation, the enforcement of any rule would not materially increase the comfort, health, or safety of employees, and would work undue hardship on the employer, exemptions may be made at the discretion of said commission, but such exemptions must be in writing to be effective, and can be revoked after reasonable notice is given in writing. All applications for such

exemptions shall be made by the employer to the commission in writing. Every person, firm, or corporation employing women or minors in any factory shall post a copy of this order in a conspicuous place in each room in which women or minors are employed. The term "factory" includes any mill, workshop, or other manufacturing establishment, and all buildings, sheds, structures, or other places used for or in connection therewith, where one or more persons are employed at manufacturing, including making, altering, repairing, finishing, bottling, canning, preserving, drying, packing, cleaning, or laundering of any article or thing.

1. *Lighting of workrooms.*—Every workroom shall be supplied with adequate natural or artificial light during the working hours. The sources of illumination shall be of such a nature and so placed as to provide a reasonably constant and uniform illumination over the necessary area of work and avoid the casting of shadows on the work. They shall be so placed or shaded that light from them does not fall directly on the eyes of an operator when engaged on her work.

2. *Ventilation and temperature of workrooms.*—(a) The ventilation of each workroom shall be adequate.

(b) If dust, gases, fumes, vapors, fibers, or other impurities are generated or released in the course of the process carried on in the workroom, in quantities tending to injure the health of those employed therein, such suction or other special devices as may be necessary to remove at the point of origin, or render harmless, such impurities, shall be installed and operated.

(c) The nature of the process permitting, there shall be maintained in each workroom during the months from October to April, inclusive, a minimum temperature of 58° F. and, the weather permitting, a maximum temperature of 72° F. If, owing to the nature of the process, excessive heat be created in the workroom, such special devices as may be required to reduce such excessive heat shall be installed and operated.

3. *Floors of workrooms.*—(a) Each workroom shall be provided with a smooth, tight floor, which can be kept in a clean and sanitary condition.

(b) All sweepings, waste, and refuse shall be removed in such manner as to avoid raising of dust or odors, as often as is necessary to maintain the workroom in a clean and sanitary condition.

(c) Where wet processes are employed, the floors must be pitched to provide for drainage so that there will be no unreasonable depth of liquid at any point.

(d) Where floors are wet and women are required by their work to walk over or stand upon them, wooden racks or gratings of an adequate height shall be provided at such points. Unless floors are of wood, cork, or rubber composition, or other approved nonheat-conducting and resilient material, mats or gratings of such approved material shall be supplied at all points where women are required by their work to stand.

\* \* \* \* \*

17. *Water supply.*—Each place of employment shall be supplied with pure drinking water so placed as to be convenient to the employees. Common drinking cups are prohibited. Individual cups must be used or sanitary drinking fountains of an approved design must be installed. Drinking fountains shall be kept in a sanitary condition and shall be of such design that it is impossible to place the lips in contact with the orifice from which the jet of water issues, or for the supply orifice to become submerged by the waste water. The water supply of drinking fountains shall be so regulated and maintained that a jet of at least 2 inches in height shall be constantly available.

18. *Location of wash rooms.*—There shall be adequate washing facilities provided as hereinafter specified. A sufficient number of washbowls or sink space shall be located either within the toilet room or adjacent to the toilet room and in the direct



route between the toilet rooms and the work place. Any wash sinks or bowls not so located shall be installed in an approved location.

19. *Washing facilities.*—At least 20 linear inches of sink space with one water-supplied faucet shall be supplied for each 20 women employed, or fraction thereof, based on the average number of women employed during that period of two weeks during which the largest number of women are employed, except that one washbowl shall be considered the equivalent of 20 inches of sink space. Every washbowl or sink shall be of vitreous china, enameled iron, or other approved material impervious to water, and if used on one side only shall be not less than 12 inches wide inside measurement, or if used on both sides not less than 22 inches inside measurement. Self-closing faucets shall not be used, except where wash basins or bowls are provided. Sufficient soap and either individual or paper towels shall be supplied. Roller or other towels to be used in common will not be permitted.

20. *Locker and rest rooms.*—(a) In establishments where 20 or more women are employed, a suitable room adequately ventilated and kept heated to a minimum temperature of 58° F. at all times during working hours shall be provided where women may change their clothing in privacy and comfort; where less than 20 women are employed, a separate room need not be provided for this purpose if an adequate space is screened or curtained off or other arrangement satisfactory to the commission made for privacy and comfort in dressing.

(b) In or adjacent to the above-mentioned room or space sufficient and adequate provision shall be made for the proper and safe keeping of the outer clothing of the women workers during the working hours and of their working clothes during the nonworking hours.

(c) Where more than 19 or less than 50 women are employed, there shall be provided at least one couch, bed, or cot. Where more than 50 and less than 100 women are employed, two shall be provided, and thereafter at least one for every 100, or fraction thereof, women employed. Where these couches, beds, or cots are not placed in a separate room, they shall be placed in the locker or dressing room and protected from direct observation by a suitable screen, and the first-aid kit shall be kept adjacent to them.

(d) Where 20 or more women are employed, there shall also be one stretcher for use in case of accident or illness, except that where one of the above-required couches, beds, or cots is a cot of a type suitable for use as a stretcher a separate stretcher need not be provided.

21. *Time for meals.*—Every woman and minor shall be entitled to at least one hour for noonday meal; provided, however, that no woman or minor shall be permitted to return to work in less than one-half hour. If work is to be continued through the evening, every woman and minor shall be entitled to at least one hour for the evening meal.

22. *Lunch rooms.*—Where lunch rooms are provided, they shall be adequately lighted and ventilated and kept heated to a minimum temperature of 58° during meal periods. They shall be kept in a sanitary condition, and adequate facilities for the disposal of waste provided.<sup>1</sup>

23. *Seats and work tables.*—As far as, and to whatever extent, in the judgment of the commission, the nature of the work permits, the following provisions shall be effective: Seats shall be provided at work tables or machines for each and every woman or minor employed, and such seats shall be capable of such adjustment and shall be kept so adjusted to the work tables or machines that the position of the worker relative to the work shall be substantially the same whether seated or standing. Work tables, including cutting and canning tables and sorting belts, shall be of such dimensions

<sup>1</sup> It is recommended that except during inclement weather or after dark, where no adequate lunch-room space is provided, and without exception where such space is provided, all women shall be required to leave and remain out of the workroom during the meal.



and design that there are no physical impediments to efficient work in either a sitting or a standing position, and individually adjustable foot rests shall be provided. New installations to be approved by the commission.

24. *Carrying*.—No woman shall be required or permitted to lift or carry any excessive burden.

25. *Elevator service*.—In every building in which a total of 10 or more women are regularly employed on the fourth or higher floors there shall be provided adequate elevator service to such floors, and such women workers shall be freely permitted to use such elevator service.

26. *Fire exits*.—(a) From each floor above the ground floor of any building in which women to the number of 10 or more are employed above the ground floor there shall be at least two adequate exits remote from each other. One of these exits shall be an outside stairway or runway.

(b) All exits shall be plainly marked and shall be kept clear of obstruction and in a safe condition; no combustible materials shall be kept or stored in close proximity to any exit. All exit doors shall open outward. They shall be at all times kept clear of obstruction and, during working hours, kept unlocked.

(c) In any building in which a total of 20 or more women are regularly employed on the third or higher floors there shall be provided an adequate system for giving the alarm in case of fire, and fire drills shall be held at least once in each month.

This order shall become effective 60 days from the date hereof.

Dated at San Francisco, Calif., this 7th day of January, 1919.

Order No. 4 of the Industrial Welfare Commission, dated April 16, 1917, is hereby rescinded as and of the date when this order becomes effective.

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#### NEW YORK LAW FORBIDDING WOMAN NIGHT WORKERS IN RESTAURANTS HELD CONSTITUTIONAL.

The power of the New York Legislature to forbid night work by women was sustained in a recent decision by Judge Hartzell, of the Buffalo City Court. Though this is a court of subordinate jurisdiction, the matter is of such interest as being the first decision under a new act that a brief account of it is in order.

The legislature of 1917 enacted a new section of the labor law, specifically forbidding the employment of women in restaurants between the hours of 10 p. m. and 6 a. m. in cities of the first and second class. This law was violated by one Radice, proprietor of a restaurant in Buffalo, who contended that the act was in conflict with the constitution of the State and of the United States.

Judge Hartzell, in sustaining the law, referred to a report of the State industrial commission setting forth the evils of night work by women and rehearsed the outstanding objections thereto. Reference was made to the action of 14 European States in 1906 in agreeing to prohibit the employment of women between 10 p. m. and 5 a. m., and to similar action by 9 of the States of the Union.

This long and effective discussion and agitation was held to be due to a desire to protect not only the health and safety of women, but the welfare of the State as well. The act was therefore held constitutional.

## ENGLISH WORKING WOMEN DURING THE WAR AND AFTER.

## EMPLOYMENT OF ENGLISH WOMEN DURING THE WAR.

The Board of Trade Journal (London) for March 6, 1919, contains an article on changes in employment during the war, which shows the number of employed women in certain occupations compared with those in the same occupations July, 1914. The figures are as follows:

ESTIMATED NUMBER OF WOMEN EMPLOYED IN SPECIFIED OCCUPATIONS IN ENGLAND, JULY, 1914, AND JULY, 1918, AND PERCENTAGE CONTRACTION OR EXPANSION SINCE JULY, 1914, UP TO JULY, 1918.

Occupation.	Estimated numbers employed in July, 1914.	Estimated numbers employed in July, 1918.	Percentage contraction (—) or expansion (+) since July, 1914, up to July, 1918.
Building.....	7,000	29,000	+ 320.2
Mines.....	7,000	13,000	+ 89.0
Metals.....	170,000	594,000	+ 249.2
Chemicals.....	40,000	104,000	+ 158.9
Textiles.....	863,000	827,000	— 4.2
Clothing trades.....	612,000	568,000	— 7.3
Food, drink, and tobacco trades.....	196,000	235,000	+ 19.8
Paper trades.....	147,500	141,500	— 4.3
Wood trades.....	44,000	79,000	+ 80.6
Other trades.....	89,500	150,500	+ 68.4
Total industries (estimated figure).....	2,176,000	2,741,000	+ 25.9
Government establishments.....	2,000	225,000	+10,100.0
Agriculture in Great Britain (permanent labor).....	80,000	113,000	+ 41.3
Local authorities.....	198,000	250,000	+ 26.5
Civil service.....	66,000	234,000	+ 254.4
Other occupations, including commerce, transport, etc.....	754,000	1,372,000	+ 81.9
Total.....	3,276,000	4,935,000	+ 50.6

These figures do not include the women in the Army and Navy services, nor the women police, nor the women employed in timber cutting under the Board of Trade; it is estimated that about 60,000 women were engaged in these various services in July, 1918. On the other hand, the table does not take into account the number coming into the specified occupations from domestic service or from very small shops in the dressmaking trade. It is estimated that from these two sources there came about 400,000 women, who, though they appear in the above table as an addition to the number of gainfully employed women, were yet employed in various capacities before the war.

The table shows that in the occupations with which it deals 1,659,000 more women were employed in July, 1918, than in July, 1914. It also shows that by far the most striking increase has been in the Government establishments (arsenals, dockyards, and national factories) in which the number of women employed rose from 2,000 to 225,000. The industries which before the war showed the largest numbers of woman workers, the textile and clothing trades, show an

actual falling off, as do the paper trades. The increase in the number of women in agriculture is of special interest, in view of the opinion freely expressed in England at present that the demand for women in farming work will continue and even increase now that hostilities are over.

The number employed under the local authorities and in the civil service increased largely:

In the post office the women doubled in numbers, and in other branches of the civil service they advanced from 5,500 to 107,500, an increase of 1,950 per cent. In the tramway service (under local authorities) there was an increase in numbers from 1,200 to 18,000 (1,500 per cent). In finance and banking there was a jump from 9,500 before the war to 65,000 in July, 1918, or 687 per cent.

#### PHYSICAL FITNESS OF WOMEN FOR ENGINEERING WORK.

The question of the effect upon women of the heavy work they have done during the war in English munition factories has been much discussed, but reliable data on the subject have been few and difficult to obtain. In a recent number of an English periodical<sup>1</sup> Dr. Rhoda Adamson gives conclusions drawn from a wide experience with women engaged in engineering work.

From April, 1916, till after the termination of hostilities in November, 1918, Dr. Adamson had the medical supervision of several thousand women engaged in various processes of engineering work which before the war would have been considered men's work. Before taking the position Dr. Adamson had stipulated that she should have free access to the shops at any time in order to study the different operations which women might be called upon to perform, so that she might be able to form an opinion as to the degree of physical and mental development required for such work. Thereafter as women were engaged, each one was subjected to a complete physical examination, and assigned to the grade of work for which she seemed fitted. A careful record was kept of this examination, and any defects which it revealed were noted, even though they might not seem to have much significance in connection with the occupational strain. A reexamination was made at any time when it seemed desirable—if, for instance, a woman were losing time through illness, or complained that she found her work heavy, or if there had been an injury liable to be made the ground for a claim under the workmen's compensation act. Through these successive examinations Dr. Adamson had an excellent opportunity to observe any changes in health and physique which might take place, and to determine whether the occupation could be held responsible for them.

<sup>1</sup> "Future possibilities for the work of women," by Rhoda H. B. Adamson, M. D., in *The Common Cause* (London), Feb. 7, 1919, pp. 512-514.



In deciding on the suitability of a woman for heavy work, one of the first questions was whether she had ever borne children, and if so, whether she had suffered any permanent defect from pregnancy or childbirth. "Women suffering from defective abdominal and pelvic support, as a result of childbearing, were unfit to carry out processes involving long standing, heavy lifting, or sudden strain." Therefore, women who had at any time suffered from such troubles, no matter how well they might be at the time of the examination, were passed as fit for light work only. Another group who needed special assignments were those who, apart from any question of childbirth, were sufferers from chronic pelvic inflammation, venereal in origin. These were deemed unfit for heavy standing work, or work which involved the risk of wet feet or wet clothing, but they could perform sedentary work perfectly well without any danger of aggravating their trouble. Women suffering from defective eyesight or neglected teeth were encouraged to receive treatment, adopt glasses, etc., so that they were often relieved from minor troubles which had previously handicapped them.

As a result of two years' experience Dr. Adamson is of the opinion that, provided care is taken in assigning women to work suited to their strength, they can perform without risk the engineering operations to which they have been assigned during the war, some of which were formerly regarded as entirely beyond their powers. Shell making is perhaps the most striking instance of their ability to carry on heavy work without detriment to themselves. In this, the worker must lift a shell into a lathe, perform certain operations, lift it out, replace it with another, and so on. In the English factories women were expected to lift shells weighing up to 60 pounds unaided; beyond that weight, lifting tackle was provided, but it was a common experience that up to 80 pounds women were apt, if not closely watched, to lift the shell by hand rather than to use the tackle. Yet cases of injury due to heavy lifting were very rare.

In 4,700 medical examinations during the year 1917 there were two cases of hernia due to strain at work. These were demonstrated on a second medical examination and paid for under the workmen's compensation act. Other cases attributed to strain by the women were found to be due to other medical causes entirely unconnected with their work, and when suitably treated disappeared. Uterine prolapse never occurred at all in these previously sound women. Cases of cardiac strain in previously sound hearts were also extremely rare.

The findings were as satisfactory in the case of the women who were not previously sound, and who were considered unfit for the heavier work. The lighter work to which they were put was well within their powers, and in many cases they "actually improved in general health as a result of regular hours, good food, and exercise."



Possibly, also, the care taken in correcting minor defects had something to do with this result.

Dr. Adamson suggests the probability that in other occupations women would be found equally able to carry on the work without injury to themselves or their future offspring if the same care were taken in assigning them to work suited to their individual capacities. As a further question for consideration, she suggests the possibility that such examination and grading according to physical status might be desirable for all employees without distinction of sex, as tending to secure "better output of work, and a lessened tale of accidents due to work."

#### POSTWAR OUTLOOK FOR WOMEN IN NONMUNITION FACTORIES IN ENGLAND.<sup>1</sup>

In the early part of 1917 the British Government prepared careful reports showing for each of the principal industries the extent to which women had been substituted for men, the suitability of the work for women in normal times, changes in method or equipment rendered necessary by their introduction, the degree of skill involved in the processes to which they had been introduced, etc. Now, at the close of the war, they issue a revision of this material, "brought up to date by further inquiries and supplementary reports." In this later edition, special consideration is given to the question of whether or not women are likely to be retained in the new fields they have entered.

The new work done by women is divided according to its nature into five groups—management, supervision, scientific work, process work, and laboring, both indoors and out.

In management there was less substitution of women for men than in the other groups, partly owing to the fact that there was at the outset no supply of trained women fit to take command. In the Government munition factories, where women were carefully trained, there were some remarkable instances of women charged with the full management of shell, cartridge, and filling factories. In the non-munition factories, under private management, women reached such posts more slowly, but before the end of the war they were holding them in numerous industries. Reports that women were serving successfully as managers or assistant managers were received from 21 industries, ranging from general engineering to brewing. In addition, it is known that there has been considerable substitution of women for men managers in steam laundries and clothing factories, and a considerable number of women superintendents and heads of labor bureaus in large works are acting practically as assistant managers in the matter of engaging, allocating, and dismissing labor. How far

<sup>1</sup> Home Office. *Substitution of women in nonmunition factories during the war.* London, 1919. 52 pp. Price 9d. net.

these managerial positions will remain open to women in peace times can not be forecast, but it is believed that "some at least of these will provide 'opportunities' for women after the war."

In supervisory work there was at first the same difficulty as in the case of managers—there was a lack of sufficiently trained women for the posts, but the drawback was more easily overcome. Contrary to expectation, it was found that women worked better and got on more easily under other women than under men, and the employment of forewomen has been increasingly common. In this line it is believed that an important field for the employment of women has been opened up.

With the entry of women into the more skilled branches of trade there has arisen a demand for the technically trained forewoman, which will certainly persist, and may even increase after the war, when the staffing of the upper ranks of women's trades by men will frequently present difficulties. In addition, the extension of welfare provision under the Police, Factories, etc., Act, will create and multiply posts in connection with the management and working of canteens and kitchens, messrooms, cloakrooms, lavatories, and the administration of first aid, calling for trained women to fill them.

In scientific work it is believed that women have secured a permanent footing. There is likely to be a considerable demand both for women with university training who can act as works chemists and carry on research in factory laboratories, and for intelligent working women in routine laboratory work. In the making of scientific instruments women have done particularly well:

The special aptitude of women for many of the processes is now recognized among employers, who show a strong disposition to continue to employ them after the war and are in some cases already making plans to do so. Both on its scientific and on its mechanical side the light, clean and delicate work of scientific instrument making renders it a peculiarly suitable industry for women and girls; and one of the main objections to their employment—that the prewar works were for the most part old and uncomfortable and ill-adapted to the needs of women—is fast passing away with the erection of new factories built to meet war requirements, some of them with the express purpose of staffing them with women.

In process work it was found that women could be successfully employed on many of the heavier processes formerly considered suitable only for men. Their work in skilled processes has not been carried so far as in the munition factories, possibly because less provision for their training was made in the nonmunition factories. Many of the new processes undertaken by women might well be retained by them permanently:

So far as unskilled, and to a certain extent semiskilled, processes are concerned, a very large proportion, formerly in the hands of men, are now being satisfactorily carried out by women, and most of them would be suitable for the employment of women after the war if there is a demand for their labor. Such satisfactory substitution, covering a very wide field, is seen to advantage in the boot and shoe industry

in which women are now being employed in some areas in manufacturing the heaviest type of boots, including army boots. In a few processes subdivision has been found necessary, but in the great majority of cases women perform the operations just as formerly men performed them. Light leather tanning is another good example of general substitution of women for men throughout all the processes of an industry.

The substitution of women for men in laboring work was general and continued up to November, 1918. The success of such substitution, especially in work carried on in the open air, depends on the careful selection of women of the right type. The general feeling seems to be that where light laboring work is concerned, women render good service and will very probably be retained, but where heavy work is in question their employment is economically disadvantageous and is open to objection on other grounds.

The question of the retention of women in the new occupations in which they have made good depends largely upon the attitude of trade-unions. In the engineering trades, there was a definite promise on the part of the Government that the suspension of trade-union restrictions which made possible the introduction of women should be only for the duration of the war, and that on the coming of peace the old conditions should be restored. This, however, would affect only the Government and munition factories. But in many of the nonmunition industries agreements were made between employers' associations and the unions relating to the employment of women, in which definite stipulations were made as to the processes in which they might be substituted, and permitting their work in these occupations only so long as there should be a scarcity of suitable male labor. In other industries women came in without any agreements having been made concerning them. The situation, therefore, is a complicated one, with the outcome depending to a considerable degree upon the attitude taken by the trade-unions. Nevertheless, the authors of this report are inclined to think that women will retain a considerable part of the wider field they have occupied during the war:

Two considerations, however, arise at the present stage. First, there would appear to be a fairly large new field of possible future activity for women in trades into which they have been brought during the war without agreement. Secondly, it seems clear that if the country's industries are to be maintained and its wealth increased (matters of vital importance in view of war losses, expenditures, and debt), the employment of women must be much more extensive than heretofore. Large numbers of men have been incapacitated for their previous industrial occupations; others may not resume their prewar work. Moreover, great extensions of factory premises and plant have taken place during the period of the war, and it may reasonably be expected that, for many years to come, there will be a demand for production from British factories in excess of the prewar output. To meet this demand fresh supplies of labor will be needed, and the only considerable untapped reserve of labor existing before the war was the labor of women. It is therefore to women that the nation must look to supply any largely increased demand for workers.



The definition and regularization of women's position in industry should be assisted by the remarkable increase during the war of women's organizations, and the opening to women, in a number of trades, of men's unions which had never previously accepted women members.

#### DEMANDS OF ENGLISH WORKING WOMEN.<sup>1</sup>

Since the signing of the armistice, unemployment has been increasing among English women at an alarming rate. The closing of munition factories threw thousands out of work, and as yet the normal industries of peace time have not revived sufficiently to relieve the situation among these ex-munition workers. There is a demand for women in domestic service and also in laundries, but in both cases the wages offered are so low and the conditions of work so unattractive that the women say they will not take the positions except as a last resort. Apparently employers still wish to gauge women's wages by the standards prevailing before the war, while the women not only maintain that due allowance shall be made for the rise in the cost of living, but also insist that prewar standards were too low, and that wages must not be permitted to sink again to those levels. There is a determined effort on foot among the workers, men as well as women, to secure a larger portion of the returns of labor than fell to their lot before the war. Different organizations naturally seek to compass this end by different means, and the women have adopted as one method a campaign of publicity.

As a first step in the program a mass meeting was held February 15, in Albert Hall, London, at which woman workers, skilled and unskilled, drawn from every kind of work in which the women of the country are engaged, were represented. The great majority, according to the newspaper reports, were "young and lively girls," who nevertheless were able to discuss, keenly and intelligently, the situation in which they and their comrades found themselves. "The deadly significance of the meeting was that so large a proportion of its members were already out of employment, drawing the unemployment donation because employment can not be found, and that they represented close on half a million women throughout the country who are also at this moment out of work."

The special purpose of the meeting was to put forward what the women term the three points of the working women's charter: The right to work, the right to live, and the right to leisure. The following resolutions were presented, discussed, and passed:

*The right to work.*—That this meeting affirms the right of every member of the community to work or maintenance. It views with alarm the huge army of unemployed workers for whom there seems no prospect of suitable employment. It calls upon the Government to take immediate steps to organize schemes of useful work and of train-

<sup>1</sup> Compiled from Manchester (England) Guardian and labor papers.



ing with full maintenance for workers who can not find employment in their own occupations so that they may be equipped for new occupations. It demands the retention of the national factories as centers of production of a national kind, and also as training and experimental centers. It points out that the replenishment generally of national wealth lost owing to the war, and the satisfaction of the legitimate needs of the community for all kinds of commodities and services, would provide sufficient employment for all if organized on the basis of public good instead of private profit.

The meeting recognizes that all workers, whether by brain or hand, skilled or unskilled, have a common bond of union in their common service. It demands equal consideration for clerical and professional workers, and pledges itself to work for closer cooperation between unions, and against any sex or class distinctions.

*The right to life.*—That this meeting views with grave concern the determined efforts which are at present being made to undermine the standard of women's wages, and in many cases to reduce wages to far below even their prewar purchasing power. It therefore desires to impress upon the minister of labor the absolute necessity for the immediate exercise of his powers under the Wages (Temporary) Regulation Act and the extension of the act pending the establishment of permanent machinery to fix a legal basic wage sufficient to insure to every adult worker, as the very lowest statutory base line of wages, sufficient to provide all the requirements of a full development of body, mind, and character.

*The right to leisure.*—That this meeting calls upon the Government for the immediate introduction of a right to leisure bill fixing a normal working week of 40 hours, with a maximum of eight hours per day, so that full opportunity for recreation and physical and mental development may be available for all.

Throughout the meeting emphasis was laid on the fact that the unemployment from which women and men alike were suffering co-existed with a tremendous need of manufactured articles, and that if peace-time production were organized with a tithe of the energy, resource, and determination shown in the days of the war, the need for work and the need for goods might both be satisfied. The national factories, instead of being sold to private capitalists, might easily be utilized for production on a national scale. A shop steward from Woolwich Arsenal presented this point effectively:

In Woolwich, she said, the machines were idle inside the arsenal, and the girls were idle outside the Labor Exchange. They knew that many things were needed; they knew they could make them. Why should they be cut off from usefulness, and forced to subsist upon doles?

A deputation was appointed from the audience present to wait upon the Prime Minister and lay the resolutions before him. No report has yet been received as to what reply the Prime Minister made.

# INDUSTRIAL ACCIDENTS AND DISEASES.

## ACCIDENTS AT METALLURGICAL WORKS IN THE UNITED STATES, 1917.

The fourth report of the United States Bureau of Mines on accidents at metallurgical works, recently issued as Technical Paper 215, shows a slight increase in the fatality rate and a small decrease in the rate for nonfatal injuries for both ore-dressing plants and smelting plants.

The returns for smelting plants include copper, lead, zinc, and quicksilver smelters, as well as refineries, but do not include iron blast furnaces. The figures for ore-dressing plants cover concentrating plants for copper, lead, and zinc ores, stamp mills, cyanide plants, iron-ore washers, flotation mills, sampling works, etc.

While this report is not absolutely complete, it is said to cover more than 90 per cent of the industry in the United States. The number of men reported employed at both smelters and ore-dressing plants in 1917 was 68,487, as compared with 66,194 in 1916.

The number of fatal injuries reported for 1917 was 47 at ore-dressing plants and 53 at smelters, the fatality rates being 1.93 and 1.05 per 1,000 300-day workers, respectively. In 1916 the rates were 1.41 for ore-dressing and 0.73 for smelting plants.

In 1917 there were 2,952 nonfatal injuries reported at ore-dressing plants and 7,745 at smelters, the rates for nonfatal injuries being 121.12 per 1,000 300-day workers for ore-dressing plants and 152.88 for smelters. The rates for 1916 were 135.66 and 195.61, respectively, for the two classes of plants.

The table following shows the number of days of work performed, the actual number employed, the number of 300-day workers, and the accident rates for both fatal and nonfatal injuries at metallurgical works in 1915, 1916, and 1917:

SUMMARY OF LABOR AND ACCIDENTS AT METALLURGICAL WORKS IN THE UNITED STATES, 1915, 1916, AND 1917.

Industry and year.	Days' work performed.	Employees.		Killed.			Injured.		
		Actual number.	On 300-day basis.	Actual number.	Per 1,000 employees.	Per 1,000 300-day workers.	Actual number.	Per 1,000 employees.	Per 1,000 300-day workers.
Ore-dressing plants:									
1915.....	5,732,184	18,564	19,107	30	1.62	1.57	2,095	112.85	109.65
1916 <sup>1</sup> .....	7,041,083	22,365	23,470	33	1.48	1.41	3,184	142.37	135.66
1917 <sup>1</sup> .....	7,311,499	24,111	24,372	47	1.95	1.93	2,952	122.43	121.12
Smelting plants: <sup>2</sup>									
1915.....	10,878,486	31,327	36,262	38	1.21	1.05	5,718	182.53	157.69
1916 <sup>1</sup> .....	14,809,046	43,829	49,363	36	.82	.73	9,656	220.31	195.61
1917 <sup>1</sup> .....	15,197,643	44,376	50,659	53	1.19	1.05	7,745	174.53	152.88

<sup>1</sup> Not including auxiliary works, as shops, yards, etc.

<sup>2</sup> Not including iron and steel.

Tables showing causes of accidents indicate that at the ore-dressing plants machinery was responsible for about 30 per cent of all fatalities and for over 15 per cent of all nonfatal injuries. In the smelting plants machinery caused about 23 per cent of the deaths and nearly 7 per cent of the nonfatal injuries. Falls of persons represented over 19 per cent of the fatalities at ore-dressing plants and over 15 per cent at smelting plants.

The report contains separate data relating to auxiliary plants, which include machine shops, carpenter shops, yards, and general construction. In these plants 50 per cent of the fatalities were due to falls of persons, and a large percentage of nonfatal injuries were due to hand tools, falling objects, and falls of persons.

The tables show the importance of the various causes of accidents at metallurgical works and should serve as guides for the safety engineer as to where preventive measures might be used most effectively.

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#### NEW HAZARDS IN ELECTRIC ARC WELDING.

The following article on new hazards in electric arc welding, by Alfred W. Jansen, safety engineer, New York Navy Yard, is reprinted from "Safety," the bulletin of the Safety Institute of America, for February 1919 (pp. 44-46):

The adoption of electric arc welding in the shipbuilding industry as a substitute for riveting has presented new dangers to workmen, which, under some conditions are unusually hazardous. The eye has been taken care of, for in recent years the dangers from this intense light have been studied by specialists and adequate protection has been given. But the harmful effect of these light rays upon the tissues of the human body has had little attention. How to protect the workman from this hazard is more easily solved when the cause of the intensity of the light ray is known under all conditions.

The complete spectrum usually presented in the process of electric arc welding is composed of the visible, the ultra-violet, and the infra-red rays. The effective spectrum scale ranges from about 0.2 to 2.5 microns. Of this the ultra-violet is from 0.2 to 0.4; the visual spectrum from 0.4 to 0.7; and the infra-red from 0.7 to 2.5. The ultra-violet and the infra-red, the invisible rays, are those harmful to the exposed tissues of the body. The intensity of the invisible rays is determined by the temperature of the arc and the surroundings which may either reflect or absorb the light. While it has been known that painful body burns have resulted from exposure to these extreme light rays, it has not been determined whether they are caused by the ultra-violet or the rays in that point of the spectrum where the X ray is found. The infra-red rays are not the cause, for they have only an irritating effect and are rather uncomfortable and fatiguing, but not especially dangerous.

There are no great hazards in arc welding done in the open, in shops, or in places where special screens may be erected to protect the welder and those near by. They have not been serious in confined places such as boilers, where the surroundings have absorbed some of the intensity of the light and not reflected it. But on board ship, in compartments where the working space is hardly large enough for two men to be



employed at the same time and where the entire surroundings have been covered with red lead, the dangers of the light rays seem to be greatly increased.

Not very long ago, electric arc welding was introduced aboard a large steel ship under construction, in a compartment as described above. The welder had worked with the same apparatus for some time under ordinary conditions and had not experienced any burns on the exposed parts of his body. Within a few hours the man complained of burns on his neck and chest. A close examination of the skin showed it to be dried up and cracked, very much like an old piece of china, on which the glazing has become crazed. Added to this the skin was slightly inflamed and was deeper in color on the right side of the neck. Here there was a spot about the size of an egg which seemed to have been subjected to more exposure than other parts of the body. There was a little tinge of blue on the inflamed spot which looked like a burn caused by the X ray. It was decided that this was due to the improper adjustment of the face mask, which caused constant exposure to the direct rays. The burns on the back of the neck were apparently caused by the intensified rays reflected from the red lead. The thin cotton shirt worn by the welder did not afford sufficient protection for his chest. Other parts of the body covered by more clothing were not affected in any way.

After four days the burned condition healed sufficiently to permit further experiments to determine the cause of this unusual condition. The welder was supplied with a linen bandage lined with lead foil, which he wore as a collar to protect the entire neck. As ultra-violet rays will not pass through lead, and as no further burns appeared, it was decided that the ultra-violet rays were the cause of the trouble. As the welder had worked with the same apparatus under other surroundings, it was concluded that the reflected rays from the surfaces painted with red lead were increasing the power of the harmful rays to such a degree as to cause painful burns. The ultimate result of such severe burns might even lead to cancer.

The next experiment was made by welding in a compartment which had not been red leaded, and where the surfaces were more or less of the natural metal color. The hazard in this case was very much reduced. No special apparatus being available for measuring the intensity of the rays in the red-leaded compartment, it is not known whether the ultra-violet rays had reached that point in the spectrum scale where the X ray is found. It seems, however, that the red lead had either the effect of absorbing the infra-red rays, and thereby intensifying the ultra-violet, or the red lead converted the infra-red to ultra-violet rays.

As in shipbuilding these working conditions in a compartment are extremely common, and as the burns prove so intense, it seems a very necessary precaution to have all the welding done before the surrounding surfaces are red leaded. This is the surest way of giving the workman maximum protection.

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#### FATAL INDUSTRIAL ACCIDENTS IN CANADA DURING 1917.

During 1917, according to a report <sup>1</sup> of the Canadian Department of Labor, there were 1,195 fatal industrial accidents in Canada, an increase of 245, or 25.8 per cent, as compared with 1916. The steam railway service, the report states, showed a slight reduction and the mining group a slight increase in percentage of fatalities as compared with 1916. In the lumber industry the percentage was more than doubled, while in the metal group the percentage remained

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<sup>1</sup> The Labor Gazette (Ottawa), March, 1919, pp. 372-374.



the same as that of 1916. The following table shows the total number of fatalities and the percentage distribution by industry or occupation:

NUMBER OF FATAL INDUSTRIAL ACCIDENTS AND PERCENTAGE DISTRIBUTION, BY INDUSTRY OR OCCUPATION, IN CANADA, IN 1917.

Industry or occupation.	Fatal accidents.	Percentage of total.
Agriculture.....	40	3.4
Fishing.....	24	2.0
Lumbering.....	156	13.0
Mines, smelters, and quarries.....	235	20.0
Railway, canal, and harbor construction.....	13	1.1
Building and construction.....	64	5.4
Metals, machinery, and conveyances.....	123	10.3
Woodworking trades.....	7	.6
Pulp and paper mills.....	24	2.0
Clothing.....	2	.17
Textile.....	2	.17
Food, tobacco, and liquor.....	16	1.3
Chemicals and explosives.....	26	2.2
Leather.....	2	.17
Steam railway service.....	262	22.0
Electric railway service.....	10	.8
Miscellaneous transport.....	45	3.8
Navigation.....	53	4.5
Public utilities.....	29	2.4
Public and municipal employment.....	20	1.7
Miscellaneous trades.....	42	3.5
Total.....	1,195	100.0

Of the fatalities 200 were caused by falling objects, 150 by explosive substances, 144 by railroad cars, 124 by persons falling, and 112 by drowning, while a number of different causes were responsible for the remainder.

The report states that the practice in previous years of recording nonfatal accidents has been discontinued owing to the difficulties involved in compiling the information, and because the results when obtained were of a nature so approximate as to be of little use for statistical purposes.

## WORKMEN'S COMPENSATION.

### SELECTION OF THE PHYSICIAN UNDER COMPENSATION LAWS.

BY JOHN W. MOWELL, M. D., MEDICAL ADVISER TO THE INDUSTRIAL INSURANCE COMMISSION OF THE STATE OF WASHINGTON, AND CHAIRMAN OF THE STATE MEDICAL AID BOARD.

[Paper read before the fifth annual meeting of the International Association of Industrial Accident Boards and Commissions, held at Madison, Wis., September 24-27, 1918.]

The selection of a physician under compensation laws depends largely upon the law itself; so what I have to say will be from the standpoint of the compensation law of the State of Washington, and it resolves itself into the following:

First. The free choice of a physician by the injured workman.

Second. The selection of a physician by the employer, after securing the consent of his workmen to contract for their care.

Third. The selection of the physician for special work, by the industrial insurance commission through the medical aid board.

Under what is known in our State as the "State plan," the law grants the workman the privilege of selecting his own physician in case of injury, provided he resides within a reasonable distance from the injured workman. While this plan seems quite equitable and it appears to be the natural thing to do, it has a good many shortcomings. For instance, to the isolated workman who is employed in a locality where there are only one or two physicians, free choice means little, and the injured workman has to accept the services of the first physician he can obtain. However, in the larger cities where there is a great number of physicians we find that some of the workmen make a wise choice while quite a large per cent of them for some reason or other, select a physician who is not very well equipped for the work at hand.

We often find that a workman who has received a serious fracture will select a physician who knows little about fractures; also a man who receives an injury to his eyes may go to an ordinary practitioner for treatment until the serious nature of the case makes it necessary to transfer him to an eye specialist, whom he should have consulted in the first instance. This occurs more or less with reference to all kinds of injuries. We have seen numerous times, and once within the last month, a workman who had received a Colles' fracture,<sup>1</sup> that had never been badly displaced, but had been treated by a long anterior and posterior splint extending over the fingers. The splints

<sup>1</sup> A Colles' fracture is a fracture of the lower end of the radius, with displacement backward.

were retained two months. This man was past middle age and not only his arm but his entire hand was so disabled that it was practically useless, not due to the fracture but due to the manner in which it was handled. His condition is such that he practically will have a useless arm and hand the rest of his life.

We have also seen numerous Pott's fractures<sup>1</sup> that were treated by physicians who were not well up in handling this particular fracture, and did not appreciate the final results that are so apt to follow. The claimants are disabled from lack of proper alignment and left in a seriously crippled condition.

Since surgeons learn largely from experience in handling these cases, the surgeon who handles few may entirely fail to appreciate the condition that he is dealing with and trust too much to chance, and after it is too late to remedy the condition he finds that he has been quite shortsighted.

To my mind the principal thing that can be said in favor of free choice of physician by the injured workman is the effect that it has on his mind; that is, the feeling that he is getting what he wants.

Under the contract plan we have a good deal of the same conditions to contend with, since in isolated districts it is impossible to keep a physician in the locality under the "free choice plan," so some physician, and very often the man with very little experience, locates in the district and contracts with the employer for the care of his workmen, on a monthly payment basis, so that he may be able to maintain himself in that location. He proceeds to handle everything that may follow, to the misfortune of the workmen, and gets his experience, sometimes, at the expense of the workmen and employer. If he is a close observer his work will improve, as it is largely along one line.

In the larger industrial centers some of the contract men are very efficient "business getters" and obtain their contracts largely from enterprise in that direction. They must, however, give service equal to any that can be given in the district, or they are not able to retain their contracts. This they either do by becoming quite efficient themselves or associating themselves with some surgeon who is well equipped to do the work. The medical aid board also has this check with reference to contract work, that it must be satisfied that the surgeon who is taking the contract is able to give the men as good service as they can get in that locality. The same rule holds good in the isolated districts.

There is one unfortunate feature of the contract plan that has given and is at present giving the State medical aid board considerable trouble. It is the commercializing of the contract plan by non-

<sup>1</sup> A Pott's fracture is a fracture of the lower end of the fibula, accompanied with injury to the ankle joint so that the foot is dislocated outward.

medical men who form a hospital association and then go to the employer and employees and by offering them some special inducement get the signatures of the workmen; giving their consent to the employer to make a contract for their care. Then they secure the services of a surgeon and pay a small part of the proceeds to him for the work and keep the remainder. This has brought about a lot of dissatisfaction among the workmen and the physicians of the State, causing some agitation at the present time toward State hospitals for the care of workmen under the industrial act.

Under the head of "Selection of surgeon for special work," the medical aid board requires, by rule, where a contracting surgeon is not able to do the work personally that he must furnish the services of a specialist.

Under free choice of physician the medical aid board, by rule, reserves the right to transfer a man for treatment to a surgeon of its own choice where it becomes evident that the injured workman is not receiving the service that he should at the hands of the physician of his choice. In making this selection the board is guided entirely by its knowledge of the various kinds of work that the different surgeons of the State are best fitted to do. This knowledge is based on seven year's experience observing the work done by the physicians in the State.

In conclusion, I would like to say that for the ordinary accident I feel that the workman should have "free choice of physician," but in more serious accidents it would be much better if he would take the advice of some one who is in a position to know what physician is best equipped by experience, or otherwise, to treat the particular condition from which he is suffering. In this way the permanent partial disabilities resulting would be fewer and the injured man would be left in better shape to take up a gainful occupation, for the disability awards, although as liberal as under any compensation act, are not in keeping with what the workman loses.

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#### REPORT ON OHIO WORKMEN'S COMPENSATION INSURANCE FUND BY STATE BOARD OF COMMERCE.

The Ohio State Board of Commerce has issued a report of 22 type-written foolscap pages presenting the results of an investigation made by it of the workmen's compensation insurance fund of the State. This investigation was conducted by means of questions sent to employer members of the Board of Commerce, to "about 500 employers selected at random and without reference to the number of their employees, their business, or location" to be answered by their employees who had been injured, and to about 2,000 doctors, likewise selected at random.



The investigation was made early in March of this year. Answers were received from 307 employers and 576 doctors, though not all of these answered every question. The number of employees answering is not given, but the largest number reported as answering any single question is 180. The object in undertaking the investigation is stated to be "for the purpose of ascertaining as accurately as possible the facts as to just how the State fund in Ohio is being administered, and how effectively it is accomplishing the results contemplated by the workmen's compensation law of the State." Numerous inquiries had been received from interested persons within and without the State, employers, business organizations, and legislators, and the facts are sought to enable the board to make answers thereto. All letters asked for a "fair, comprehensive report," not proposing to discuss the workmen's compensation principle on its merits but asking for an "opinion of how the law is being administered."

Employers were asked the number of their employees, whether or not they are subscribers to the State insurance fund, whether the State inspects plants to determine classification, and whether such classification is satisfactory, data as to procedure and results including promptness and fullness of settlement, complaints by employees and medical practitioners or hospitals, whether the employers advance money for benefits or for doctors' services, etc.

Questions to employees inquired as to the promptness of first payments, number of papers required to be filled out, need or otherwise of help in filling out the papers, payment of fees to doctors or others in order to get medical attention or to secure an award, delays or incompleteness of payments, etc.

Physicians and surgeons were asked whether they treated industrial accident cases and if not why, how much filling out of papers was required and whether it could be reduced, whether charges were cut down, whether they were promptly paid, whether they required from employer or workmen a guarantee of payments in advance, whether benefits were promptly paid, etc.

All classes were asked whether correspondence was promptly answered, and employers and doctors were asked if they had changes to recommend.

The answers furnished were summarized with comment, and while a measure of importance must be attached to the results of this investigation, they can not be looked upon as in any sense complete or authoritative. Most disconcerting of all is the frequent manifestation of a spirit willing to discover faults, rather than to secure unbiased statements. Some of the questions are so phrased as to encourage the airing of dissatisfaction and the making of complaints

rather than the development of the facts on which an opinion might be formed. Then, too, the complaints enumerated in the report are mainly such as may be offered against any compensation law, few of them being based on matters peculiar to a State fund system.

For instance, the law makes insurance compulsory on employers of five or more persons, unless financial competency as self-insurers is satisfactorily proved, self-insurers contributing also to the State surplus fund. It is commonplace that such competence can most often be shown by large employers and that they normally make up the class of persons who desire such a privilege and secure legal provision for the same. Yet the fact that large employers constitute the larger percentage of self-insurers is dwelt upon with considerable elaboration, reaching the conclusion that "it would seem that there must be some particularly important reason for so large a percentage of the employers of larger numbers of employees not taking advantage of the State insurance fund."

Again, to the question: "Are you satisfied that you are properly classified?" 179 answers were received, many employers not answering it. Thirteen employers "did not know."

As against only 105 who answer this question in the affirmative, 61 answer that they are not satisfied that they are properly classified. \* \* \* With only 105 affirmatives out of 179 answers to this question, we are unable to say that, as for our membership at least, there is any general satisfaction that the various plants are under the proper classification for rates.

It is computed that "of those answering (this question) 34 per cent were dissatisfied." It is just as easily derivable that of 307 employers returning schedules but 20 per cent took exceptions to the State's ratings, and that "only" 61 in all were not satisfied.

Doctors feel quite generally the burden of writing out reports, keeping records, etc., but are far from being agreed as to how practicably to reduce this work. Asked if they are satisfied with the dealings of the commission with them, 361 say "yes," 155 answer "no," and 21 indicate qualified approval.

No attempt is made to generalize on the answers of employees beyond an opinion that there is delay in settlement, and but little information of real significance seems to have been obtained from them.

Two persons, one employer and one doctor, are quoted as speaking of political influences affecting undesirably the work of the commission, while several doctors object to the commission's methods of handling their bills. Some employers complain that rates are too high and that settlements are slow. On the other hand, improvement in the medical administration is noted by one doctor, while employers' letters are quoted expressing satisfaction with the law and its administration.

**COMPENSATION FOR PERMANENT PARTIAL DISABILITIES UNDER  
FEDERAL COMPENSATION ACT.**

Recent compensation data compiled by the United States Employees' Compensation Commission show that the benefits awarded under the permanent partial disability provisions of the Federal Compensation Act are exceedingly low as compared with similar benefits awarded under most of the States acts.

The working out of a satisfactory basis of compensation benefits for injuries causing partial disability has been most difficult. Compensation for temporary total disability is inadequate, especially in view of the fact that while the employee may be able to return to work of some sort within a few weeks he is handicapped for life by reason of some maiming or other injury which interferes with his ability as a workman. To provide for such contingencies two methods have generally been adopted. One method, found in most of the State acts, is the adoption of a specific schedule of injuries for which benefits are awarded for fixed periods, ranging generally from 200 weeks for the loss of an arm to 15 weeks for the loss of a little finger, the payments being based upon the percentage of wages earned at the time of the injury. According to the second method, found in three or four State laws and in the Federal act, compensation benefits are based upon the wage loss occasioned by such disability, payments continuing during incapacity but usually subject to maximum limits.

The advantages of the "schedule" method of compensating for partial disabilities is its simplicity and definiteness. It is maintained that there is an apparent fixed proportionate loss for which an equitable award can be made, and which should be made in every case at the time of the injury. The advocates of the "percentage-of-wage-loss" method contend that the wage loss may develop with the passing years and that the subject of the amount of compensation should be open to revision in accordance with the changing conditions. On the other hand, this method leaves the matter open to remote contingencies and to the possibility of the disability arising at a time when there would be no fund available from which the employee could be compensated. Furthermore, the removal of the employee or other change of conditions might make it impossible to take any steps in the way of proof and the securing of the contemplated compensation. For example, take a typical case under the Federal act: A man sustains an injury which results in the loss of a hand. In three months he returns to work for the United States Government at his previous wage. Under the circumstances the only compensation he can be awarded under the provisions of the act is for the three months total disability period. True, as long as he receives full wages he is financially better off than he would be



drawing compensation benefits. On the other hand it is undoubtedly also true that the loss of a hand ordinarily constitutes a serious economic handicap, the effect of which, though not discernible at present will nevertheless be felt eventually. The probability of his receiving no additional compensation in the event of a future decreased wage or loss of employment increases with the lapse of time.

The average duration of disability and the amount of compensation paid in cases of permanent partial disability under the Federal Compensation Act from September 7, 1916, to December 31, 1917, is shown in the following table:

COMPENSATION AWARDED FOR PERMANENT PARTIAL DISABILITIES UNDER  
FEDERAL COMPENSATION ACT, SEPT. 7, 1916, TO DEC. 31, 1917.

Nature of injury.	Number.	Average days of total disability.	Average compensation paid.	Average medical expenditure.	Average total compensation and medical expenditure.
<b>Dismemberments: Loss of—</b>					
Hand.....	6	88.3	\$155.77	\$147.00	\$302.77
Thumb.....	4	58.5	72.15	9.38	81.53
Finger.....	51	62.8	77.74	27.23	103.61
Two or more fingers.....	47	69.6	104.55	30.59	135.77
One phalange.....	98	38.6	56.60	17.40	74.01
One foot.....	3	129.0	147.91	73.17	221.08
One leg.....	6	259.8	344.22	66.74	411.16
One eye.....	25	51.3	75.00	81.06	156.06
Toe or toes.....	19	69.2	87.92	32.30	120.22
<b>Total dismemberments.....</b>	<b>259</b>	<b>57.2</b>	<b>83.84</b>	<b>33.64</b>	<b>117.48</b>
<b>Loss of Use of—</b>					
Shoulder.....	6	48.2	101.12	11.34	112.45
Arm.....	48	56.5	112.06	42.59	154.65
Hand.....	10	68.8	169.57	36.84	206.41
Thumb.....	15	48.3	73.11	15.83	89.00
Finger.....	70	42.5	64.01	15.35	71.81
Two or more fingers.....	12	71.5	115.35	49.71	165.06
One foot.....	20	103.66	185.77	66.40	252.16
One leg.....	44	147.9	234.26	86.28	320.54
Both legs.....	3	105.7	195.56	43.17	240.06
One eye (partial loss of vision).....	31	51.1	77.34	87.53	164.87
Both eyes (partial loss of vision).....	1	9.0	9.73	39.18	48.88
One ear.....	2	35.0	70.00	51.55	121.55
Jaw.....	2	91.0	178.51	138.11	316.62
Great toe.....	1	18.0	31.11	.....	31.11
<b>Total loss of use.....</b>	<b>265</b>	<b>72.6</b>	<b>120.44</b>	<b>47.80</b>	<b>168.24</b>
<b>Other Permanent Partial:</b>					
Impairment of hearing.....	1	14.7	.....	.....	.....
Mitral regurgitation; aortic stenosis.....	1	267.0	557.81	152.89	710.70
Cardiac dilatation.....	1	87.0	153.34	60.00	213.34
Myocardiac degeneration.....	1	72.0	123.82	60.00	183.82
Weakness of back.....	5	57.8	98.50	51.00	149.50
Loss of testicles.....	2	131.0	233.34	244.55	477.89
Stricture in meatus.....	1	15.0	24.45	28.45	52.90
Tuberculosis.....	1	52.9	.....	10.00	10.00
Palsied condition.....	1	32.0	42.96	23.69	71.65
<b>Total other permanent partials.....</b>	<b>14</b>	<b>68.5</b>	<b>116.30</b>	<b>59.97</b>	<b>176.28</b>
<b>Grand total.....</b>	<b>538</b>	<b>62.9</b>	<b>102.70</b>	<b>41.30</b>	<b>144.00</b>

The above cases include only those in which the disability terminated before June 30, 1918. In addition there were 50 cases of permanent disability (including several total disability cases) for which com-



pensation was still being paid on the above date. Were these cases included in the table the average amount of compensation would of course be somewhat greater, but would far from equal the amount paid in similar cases under most of the State compensation acts. It will be noted that the average compensation paid for the loss of a hand was only \$155.77; the average for the loss of a foot, \$147.91; and the average for the loss of an eye was \$75. These amounts would only be about 10 per cent of the benefits which would probably be received under State acts. It should be borne in mind, however, as previously stated, that the compensation amounts shown in the table do not include benefits which would be receivable in case of future disability.

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#### SAFETY AND MERIT RATING LAW OF WASHINGTON.

The Legislature of Washington at its session in 1917 enacted a law embodying features that were novel in the United States, providing for a State medical aid board of three members, with local boards to assist in the work of administering the medical benefits of the State compensation law. The State board consisted of the chief medical adviser of the industrial insurance commission, and two other members appointed by the governor on the nomination of the employers and the employees of the State, two persons being proposed by each group, and the governor selecting one. This board issued rules and regulations and promulgated forms, but had no administrative authority, this devolving upon the local boards. Both classes of members were to be paid for actual days of service rendered, only part-time service being contemplated. The number of local boards was to be fixed by the State board.

This measure is said to have effected great savings in time lost and compensation required, but did not go to the root of the matter, in that it contained no provisions as to safety and accident prevention. The legislative session just closed enacted a law (chapter 30) which adds important supplemental provisions, also superseding the former law in part. It is the product of action taken by a committee appointed by the industrial insurance commission to consider the question and make recommendations. Seven employers and seven employees composed the commission, which was unanimous in its recommendations, the measure also passing with but a single opposing vote in the house, and unanimously in the senate.

The provisions of the act are summarized by this committee in a statement which is in the main as follows:

This safety bill is the result of the deliberation of the committee appointed by the State Industrial Insurance Committee last September for the purpose of providing safety measures under the State laws for workmen working under the classification of

the industrial insurance act. It is the third of the industrial welfare measures coming under this act; the first being the industrial insurance act itself, providing for compensation to injured workmen, framed by a committee appointed by the governor and passed at the legislative session of 1911. The second was the medical aid bill which is amendatory and a part of the industrial insurance act passed by the legislature at the 1917 session. This is the third of these measures, an amendment to the compensation act, and its provisions are such as are intended to decrease the number of industrial accidents occurring in the State, and thereby decreasing the time loss of workmen and the consequent expense to the State accident fund, and rewarding or penalizing those industries that respectively comply with the law or fail to comply with the law.

The medical aid act passed in 1917 according to the statement of the chairman of the industrial insurance commission was largely responsible for the decreased time loss and consequent decreased expense to the State accident fund of 1918 over the previous year of 1917, this in face of the larger employment throughout the State during the year of 1918.

The framers of this measure have every confidence that when once this measure becomes a law a still larger decrease of accidents throughout the State will be the result of its operations.

The measure provides that every workman employed in industries classified under the compensation act shall have, first, a safe place to work; second, the machinery with which they work shall be so safeguarded as to reduce injury to a minimum, and third, that these workmen shall receive educational instruction by qualified safety engineers to the end that they will know the dangers incident to their employment and be alert to these dangers always.

The measure provides that it shall be administered by the two members of the present medical aid board other than its medical member, and further provides that the State coal-mine inspector and the State labor commissioner shall be advisory members of this board, but without vote. It couples the machinery of the State labor commissioner and the State mine inspector offices in such a manner that both of these departments have supervision over the industries of the State in their respective spheres as regards the safe place and safety-device provisions of this act; that is, these two offices with their traveling inspectors see to and report upon what establishments do or do not comply with the provisions of the law as laid down under the rules and regulations promulgated by the State safety board.

The measure further provides for the division of the State into three districts, each of which is to have a district board comprised of two members, one member—

being an employer nominee, and one an employee nominee to the State central board which has the power of final appointment. Each of the members of the district board must pass a qualifying examination before the State safety board on safety engineering, its educational features and other functions entering into safety work, as well as on first aid to the injured workmen.

The functions of these district boards will be dual in nature; that is, their work will come under both the State safety board and the State medical aid board. They will have charge of the educational features of the work within their district. In addition it will be their duty to analyze every serious accident that occurs within their district to the end that they shall place the responsibility for the same and endeavor to prevent similar accidents in the same or other establishments presenting similar conditions. They will also have supervision of the care of workmen injured in industries within their district, and will thus replace the present local medical aid boards, which are done away with under the provisions of this new measure. That

is, it is made a part of their duty to see that all the services that enter into the care of a workman who is injured are adequate and efficient under the provisions of the medical aid law, to the end that the time loss sustained by such workmen shall be as small as possible, thus increasing the working time of the individual and decreasing the drain upon the State accident fund resulting from his injury.

These local district boards are under the direct supervision of the State central board, to which they make all reports, and from which they receive the rules and regulations provided for by this act.

The merit rating features of the measure are fourfold in character:

1.—Providing for safe place standards, or safe place of work, providing that establishments fully complying with the same shall receive a merit reward of five per cent of the total of the contribution of the establishment so complying to its class accident fund, and inversely, those establishments not complying shall be penalized five per cent of their total annual assessment.

2.—Those establishments placing into effect the safety device standards or machinery safeguards will receive a merit reward of another five per cent of their contribution to their class accident fund, and if they fail to comply they will be penalized by having to pay into their class accident fund five per cent of the total of their contribution.

3.—Establishments fully placing into effect within their establishments and amongst their workmen the educational features of the bill, will be rewarded an additional ten per cent of their annual contribution, or penalized ten per cent if they fail to do so. This will make it possible for an establishment to receive under the above three rules a total of 20 per cent of their contribution to their class accident fund annually, or failing to do so have a penalty of 20 per cent assessed against them; or, they may have the reward or penalty under any one or two of the above rules.

The fourth feature of the merit rating section of the measure provides that an establishment that has complied fully with the three previous rules, that is, safe place, safety device, and educational standards, and shall by experience show to have cost its class accident fund 25 per cent less than the average of the class to which it belongs, shall receive a reward of five per cent, and if it fails to comply with the three foregoing rules, is penalized five per cent, provided that its cost does not exceed 25 per cent of the average of the class; but if experience shows that the establishment cost its class 50 per cent, or more, than the average of the class, then the establishment is penalized 10 per cent, and inversely, if the establishment has cost 50 per cent less than the average cost of its class, it is rewarded 10 per cent. Thus it is possible for an establishment under the provisions of this act that has fully complied with all of its rules, and whose experience has proven of the best, to receive a reward of a total of 30 per cent of its entire contribution to its class accident fund annually.

The experience rating under the bill is made to cover an experience period of five years, and for this purpose a statistical department is created under this board for the purpose of compiling an experience table from the files and records of the industrial insurance department covering the period from January 1, 1915, to December 31, 1919, thus obtaining a five-year basic experience rating table; hereafter the first year of each five-year period will be dropped and the last previous year added, thus making a continuous five-year period upon which to base the experience rating under this measure.

The members of the State safety board and of the district boards shall be full time members devoting their entire time to the work of this and the medical aid law. It is provided that the members of the State board shall have a salary of \$4,800 annually each, and the members of the district board, \$3,600 per year. The bill further provides for the expense of the administration of the same. It makes the tenure of office for all members of all boards six years.



The sum of \$350,000 was appropriated for the first two years' operation of the act, one-half payable out of the general fund of the State, and one-half out of the medical aid fund. The act will go into effect June 13 of this year, and a reduction of accidents by 50 per cent is the minimum result to be sought.

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#### REPORTS OF WORKMEN'S COMPENSATION COMMISSIONS.

##### CONNECTICUT.<sup>1</sup>

By an act of the legislature of 1917, the report of operations under the compensation law of Connecticut was changed from annual to biennial, the pamphlet here noted being the first since the amendment. There is no provision in the law for such reports as would make possible any complete statement as to the number of persons under the act, the duration of incapacity, or the results of the injuries, either as to disabilities finally existing or costs of compensation. The report discloses, therefore, only in a very general and indefinite fashion the facts that are of primary statistical importance as to the operations of an act of this kind.

Reports of accidents have been required since the law was enacted in 1913, but statistics of accidents given in this report for the 5 districts taken together cover a period of but 22 months, from January 1, 1917, to November 1, 1918. The number reported for this period is 79,184. During the same time 19,083 voluntary agreements were approved by the commissioners, 1,890 hearings had, and 1,291 findings and awards made.

Other data were obtained by correspondence, the reply to which was dependent on the inclination of the person addressed. The period covered by the inquiries was the two years ending November 1, 1918. Self-insurers reporting had an average of 145,705 employees, paid compensation in 6,262 instances, and furnished medical or surgical aid in 263,666 additional cases where compensation was not due. Compensation paid during the period amounted to \$556,821, and medical, surgical, and hospital bills to \$535,543. It must be kept in mind that medical and surgical aid under the Connecticut law is not limited, except that it must be "reasonable," and it is set forth in the report that "the keynote of our system" is "that the proper time to cease treating an injured employee is when he needs no further treatment." The amount spent by self-insurers for compensation and for medical aid approximate quite closely; even so, the medical cost per case is slightly below \$2, taking compensated and noncompensated cases together.

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<sup>1</sup> Fourth Report of the Board of Compensation Commissioners, for the years 1917 and 1918. 34 pp. Hartford, 1918.



Insurance companies reported approximately 399,180 employees covered by insurance policies during the same two-year period, during which they paid out \$1,169,513 in compensation, and \$820,842 for medical, surgical, and hospital services. The number of beneficiaries is not reported.

A number of recommendations for amendments conclude the report. These vary in importance, but among them may be noted one affecting the schedule of awards for maimings, suggesting that such awards instead of being in lieu of all other payments be in lieu of all other awards except for the period of total disability following the loss of a member; one extending the maximum benefit period for partial disability from 312 to 520 weeks; and one adding the following provision as to the kind of injuries that may be compensated:

If an injury arises out of and in the course of the employment, it shall be no bar to a claim for compensation that it can not be traced to a definite occurrence which can be located in point of time and place, nor shall it be a defense that it is, either in whole or in part, a disease.

#### OKLAHOMA.

The biennial report of the Industrial Commission of Oklahoma, reviewing the operation of the workmen's compensation law for the two-year period, September 1, 1916, to August 31, 1918, shows the following amounts paid out in compensation and medical benefits during this period: For the year 1916-17 there was paid out in compensation the sum of \$318,681.46, while the amount paid out for medical expense amounted to \$188,015.12. For the year 1917-18 the compensation paid to injured employees aggregated \$456,988.88, and for medical attention there was expended the sum of \$210,776.24.

The number of accidents reported under the compensation law during this period is shown in the following table:

NUMBER OF ACCIDENTS REPORTED UNDER OKLAHOMA COMPENSATION ACT FOR TWO-YEAR PERIOD, 1916-1918.

Year.	Permanent total disability.	Permanent partial disability.	Accidents resulting in disability of <sup>1</sup> —		Total.
			2 weeks or less.	Over 2 weeks.	
1916-17.....	4	363	12,281	2,912	15,193
1917-18.....	7	401	16,213	3,705	19,918
Total.....	11	764	28,494	6,617	35,111

<sup>1</sup> Apparently includes permanent disability accidents.

Although the Oklahoma act is a compulsory one, many of the employers apparently refused to comply with its provisions. The 1917 legislature found it necessary to create the position of inspector whose duty it is to look up the delinquents. The inspector reported

1,220 employers who had failed to comply with the provisions of the act.

The recommendations of the commission included the following: The period of medical attention should be extended from 15 days to 30 or even to 60 days in the discretion of the commission; compensation should be granted for disfigurement; the maximum weekly compensation, which is \$10 at present, has been found to be inadequate and should be increased; and the scope of the law should be increased to cover more employments.

#### PENNSYLVANIA.

The insurance commissioner of the State has published in separate form that portion of his report for 1918 which contains the tables showing "the significant facts pertaining to workmen's compensation insurance in Pennsylvania during the years 1916 and 1917."<sup>1</sup> The tables show coal mining and other industries separately, the business of insuring workmen's benefits in coal mining under the compensation law being handled as a distinct class, apart from all others. This work is carried on mainly by an organization known as the Associated Companies, only three other agencies handling bituminous business, and but one other—the State fund—anthracite business.

Attention is called to the fact that the expense ratio for insurance in the State is less than the average for the whole country. Actuarial computation had fixed the expense ratio at 42.5 per cent of the premiums, while the experience of 1916 and 1917 showed but 38.3 per cent as the expense ratio of nonparticipating companies writing general lines, and 31.5 per cent for those writing mining insurance. The difference in the case of mining is accounted for by the fact that the amount allowed for commissions is 7.5 per cent less than in other lines. Participating companies generally showed an expense ratio of 19.4 per cent, while that of the State fund was 14.9 per cent for all lines of insurance except coal mining.

An independent rating and inspection bureau is stated to have effected a considerable saving in operating expense, and to have worked more economically and efficiently than could be the case where the work is done by the individual companies. One achievement of this bureau, under the chairmanship of the insurance department of the State, was the revision and reduction of rates in the fall of 1918, when the effect of the abnormal increases in wages could be taken into consideration. This review resulted in a 5 per cent reduction in the general classes and of 10 per cent in bituminous mining, saving to the employers of the first group approximately

<sup>1</sup> Forty-fifth annual report of the Insurance Commissioner of the Commonwealth of Pennsylvania, 1918. Part II. Harrisburg, 1918. xxviii pp.

\$500,000 per year, and to those of the second group about \$300,000. No substantial change was found to be warranted in anthracite mining.

The following table shows premiums, losses, and expenses of all companies writing a general compensation business and of those earning premiums in excess of \$1,000,000 for the two years, 1916, 1917.

PREMIUMS, LOSSES, AND EXPENSES, 1916, 1917 FOR ALL PRINCIPAL COMPANIES WRITING COMPENSATION INSURANCE OTHER THAN COAL MINING.

Insurance carrier.	Premiums earned.	Losses incurred.	Expenses incurred.	Loss ratio.	Expense ratio.
All carriers.....	\$15,358,033	\$8,513,327	\$5,227,814	55.4	34.0
Participating.....	3,423,113	1,848,162	664,290	54.0	19.4
Nonparticipating.....	11,934,920	6,665,165	4,563,524	55.8	38.3
Actna Life.....	1,560,923	785,286	579,154	50.3	37.1
Maryland Casualty.....	1,175,404	734,625	446,131	62.5	38.0
Ocean Accident.....	1,120,384	614,906	408,587	54.9	36.5
Pennsylvania Manufacturers.....	1,078,761	499,616	184,129	46.3	17.1
State fund.....	1,277,166	801,999	190,682	62.9	14.9
Travelers.....	2,535,007	1,383,465	980,035	54.6	38.7

Similar data are shown in the following table for coal mining for the same period, but covering all business written:

PREMIUMS, LOSSES, AND EXPENSES, 1916, 1917, FOR ALL COMPANIES WRITING COAL MINING COMPENSATION INSURANCE.

Insurance carrier.	Premiums earned.	Losses incurred.	Expenses incurred.	Loss ratio.	Expense ratio.
All carriers.....	\$6,272,045	\$3,898,272	\$1,772,549	62.1	28.3
Associated companies.....	4,562,878	2,928,061	1,442,033	64.2	31.5
Eureka Casualty.....	434,137	174,160	100,060	40.1	23.0
Pennsylvania Bituminous Mutual.....	260,015	99,601	79,510	38.3	30.6
State fund.....	1,015,015	696,450	150,946	68.7	14.9

The following table shows the amount and distribution of the pure premium, i. e., the net premium required to pay compensation benefits only, and the number of compensable injuries, by classes, for all compensation insurance and for selected industries, based on the experience of policies issued in 1916.

PURE PREMIUM EXPERIENCE AND COMPENSABLE INJURIES, POLICIES ISSUED  
IN 1916.

Industries.	Pay roll (mil- lions).	Pure premium.				Compensable injuries.					Total.
		Death and perma- nent total disa- bility.	Other com- pen- sa- tion.	Med- ical aid.	Total.	Death.	Per- ma- nent total disa- bility.	Per- ma- nent par- tial disa- bility.	Tem- porary.	In- de- ter- mi- nate.	
All schedules.....	\$1,234.0	\$0.24	\$0.28	\$0.11	\$0.63	1,276	64	853	43,460	890	46,543
All except coal mining..	1,090.2	.16	.22	.10	.48	786	39	691	32,619	731	34,866
Anthracite mining.....	18.7	1.56	.94	.27	2.77	128	3	19	1,643	26	1,819
Bituminous mining.....	125.2	.71	.70	.20	1.62	362	22	143	9,198	133	9,858
Quarrying and stone crush- ing.....	13.3	.77	.70	.18	1.65	44	2	39	860	35	980
Food, beverages and tobacco	45.4	.11	.20	.10	.41	26	...	37	1,443	29	1,535
Textiles.....	89.4	.04	.08	.05	.17	14	2	22	1,276	14	1,328
Needle trades.....	34.1	.02	.04	.03	.09	3	...	3	366	5	377
Leather and leather goods..	17.3	.12	.13	.06	.31	9	1	8	335	9	362
Printing and publishing....	22.7	.04	.14	.05	.23	5	...	13	316	4	338
Wood products.....	21.8	.15	.29	.13	.57	13	2	27	1,006	15	1,063
Iron and steel manufactur- ing.....	53.7	.31	.37	.18	.86	70	2	49	2,979	92	3,192
Metal working.....	75.2	.14	.30	.17	.61	44	2	79	3,992	66	4,183
Machinery building.....	70.7	.11	.32	.19	.62	36	2	99	3,170	41	3,348
Clay products.....	13.7	.30	.33	.10	.73	17	2	15	517	16	567
Glass products.....	22.3	.08	.23	.11	.42	6	2	12	886	16	922
Chemicals.....	15.8	.37	.26	.15	.78	26	2	14	623	8	673
Construction, other than building.....	23.7	.60	.51	.13	1.24	65	4	30	1,029	54	1,182
Building construction.....	69.4	.42	.59	.16	1.17	125	7	75	3,782	88	4,077
Cartage and trucking.....	37.8	.29	.32	.13	.74	50	3	11	2,209	41	2,314
Stores and dealers.....	123.3	.10	.11	.06	.27	58	1	33	2,665	36	2,793

Indeterminate injuries will, of course, ultimately be distributed among the other classes.

Certain details as to losses are shown for coal mining, in addition to the general classes. The following table sets forth experience under policies issued in 1916, showing the number of accidents, classified by results, the total estimated losses incurred, the amount paid and the estimated amount outstanding on December 31, 1917, the average cost per case, the number of compensable accidents per million dollars of pay roll and the distribution of net and pure premium. The pay roll covered was for anthracite mines, \$18,686,200, and for bituminous mines, \$125,175,800.



## LOSS ANALYSIS, COAL MINING COMPENSATION INSURANCE, POLICIES ISSUED IN 1916.

Injuries.	Number of acci- dents.	Estimated total cost.	Paid to Dec. 31, 1917.	Outstand- ing Dec. 31, 1917.	Aver- age cost per acci- dent.	Number of com- pensable accidents per \$1,000,000 pay roll.	Pure pre- mium.
<i>Anthracite.</i>							
Death.....	128	\$283,925	\$53,243	\$230,682	\$2,218	0.84	\$1.52
Permanent total.....	3	8,182	1,587	6,595	2,727	.16	.04
Permanent partial.....	19	23,037	7,557	15,480	1,213	1.02	.12
Indeterminate.....	26	51,411	8,856	42,555	1,977	1.39	.28
Temporary.....	1,643	95,928	59,188	36,740	58	87.86	.51
Medical.....		51,045	48,417	2,628			.27
All accidents.....	1,819	516,282	178,848	337,434		97.00	2.77
<i>Bituminous.</i>							
Death.....	362	815,883	129,316	686,567	2,254	3.0	.65
Permanent total.....	22	69,345	8,506	60,839	3,152	.2	.06
Permanent partial.....	143	168,893	65,987	102,906	1,181	1.2	.14
Indeterminate.....	133	205,306	22,047	183,258	1,544	1.1	.16
Temporary.....	9,198	498,426	360,953	137,473	54	74.0	.40
Medical.....		254,586	222,972	31,615			.20
All accidents.....	9,858	2,026,611	809,781	1,216,830		79.0	1.62

## WISCONSIN.

For the years 1914, 1915, and 1916, the experience of insurance companies writing workmen's compensation insurance was compiled and published by the industrial commission. On August 1, 1917, the regulation of this branch of insurance was transferred from the commission to the compensation insurance board. A recent report issued by the board<sup>1</sup> shows the compensation business of insurance companies in 1917; the expenses of companies in 1917 divided into the main groups; the combined business since September 1, 1911; and the experience by industry classes on policies issued in 1916.

Since the compensation act was passed Wisconsin employers have paid to insurance companies slightly over nine million dollars in premiums, and insurance companies have become liable for over five and one-half millions in compensation and medical aid. Experience by industry classes, for rate checking purposes, rests upon a pay roll of \$471,483,904.

During the year 1917 the total premiums earned by insurance companies on workmen's compensation policies amounted to \$2,258,040, or over one-half a million more than in 1916. This increase is occasioned by stimulated industrial activity, a large increase in wages, and by an increase in rates which became effective on September 1, 1917. In the figures and tables presented, several companies which withdrew during the year are not included.

<sup>1</sup> Wisconsin Compensation Insurance Board. Insurance Experience Under Compensation Act. 1919. 18 pp.

The premiums and losses were divided among the various groups of companies as follows:

## DISTRIBUTION OF PREMIUMS AND LOSSES.

Insurance company.	Per cent of total premium.	Loss ratio.	Expense ratio.
Wisconsin mutuals.....	31	68	17
Other mutuals.....	1	73	34
Interinsurers.....	4	73	37
Stock companies.....	64	77	39

The expenses of insurance companies for compensation business transacted in 1917 is shown in the following table:

## EXPENSES OF INSURANCE COMPANIES FOR 1917 COMPENSATION BUSINESS.

Insurance company.	Inspection.		Adjustment of claims.		Acquisition.		Taxes.		Home office.	
	Amount.	Per cent of earned premiums.	Amount.	Per cent of earned premiums.	Amount.	Per cent of earned premiums.	Amount.	Per cent of earned premiums.	Amount.	Per cent of earned premiums.
Wisconsin mutuals..	\$13,468	2.0	\$19,074	2.8	\$20,838	3.0	\$880	0.1	\$62,271	9.0
Foreign mutuals....	1,552	5.1	1,178	3.9	830	2.8	923	3.0	5,820	19.4
Interinsurers.....	220	.2	3,812	3.8	.....	.....	3,013	3.1	29,900	30.0
Stock companies....	36,150	2.4	91,104	6.3	284,624	18.3	31,460	2.2	141,722	9.8
All companies.	51,390	2.3	115,168	5.1	286,292	12.7	36,276	1.6	239,713	10.6

## SOCIAL INSURANCE.

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### REPORT OF WISCONSIN SOCIAL INSURANCE COMMITTEE.

The Wisconsin Special Committee on Social Insurance, appointed in 1917 by virtue of legislative enactment, has just made its report.<sup>1</sup> The committee was authorized "to thoroughly investigate the subject of 'social insurance,' including insurance against occupational diseases and sickness, as to the necessity as well as the wisdom of legislation upon this subject."

After hearing the representatives of various organizations the committee decided to limit itself to a study of the subject of health insurance. No consideration was therefore given to old-age, invalidity, or unemployment insurance. "A careful study of the subject in the light of economic and social conditions in Wisconsin," says the report, "has lead the committee to the conclusion that the acceptance of compulsory health insurance is neither practical nor feasible at this time." The chief reason given for rejecting a compulsory health insurance system was that there was no urgent demand or special need in Wisconsin at this time "which would make health insurance, as a compulsory measure administered by governmental authority, either necessary or expedient." The committee recognized, however, "that sickness of the wage earner, with the consequent loss of wages, is a problem more or less serious in our State."

In place of health insurance the committee recommended that the present agencies for preventing sickness should be extended and made more efficient. As regards occupational diseases, the committee is of the opinion that these should be included in the workmen's compensation act.

### FINDINGS OF THE COMMITTEE.

The number of wage earners engaged in industrial activities was estimated at 400,000, the annual pay roll of the State at about \$400,000,000, and the cost of a compulsory health insurance system operated by the State at about \$20,000,000. The views of the several groups in the State directly interested in the subject were as follows: Organized labor favored a compulsory health insurance system; the attitude of the employers "would seem to be that the subject is still in its theoretical stage and has not as yet received sufficient study and investigation to justify any legislative action or definite recom-

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<sup>1</sup> Report of the Special Committee on Social Insurance. Madison, Jan. 1, 1919. 85 pp.

mendations"; the State Medical Society at its annual convention in 1917 went on record as indorsing the general principle of health insurance, although there was a wide divergence of opinion among the rank and file of the physicians of the State.

Other findings of the committee included data on savings deposits; investments in building and loan associations; labor-union, fraternal, and establishment insurance; housing and sanitation; dependency and poor relief; and mortality among young children.

#### CONCLUSIONS OF MAJORITY.

The conclusions reached by the majority of the committee are as follows:

In approaching the subject of health insurance, it must be conceded that its appeal is at once humanitarian in motive and that it possesses at the same time the promise of economic value; and any project that involves the general welfare of mankind is worthy of acceptance, providing that it lies within the province of feasibility. A careful study of the subject in the light of economic and social conditions in Wisconsin has led the committee to the conclusion that the acceptance of compulsory health insurance is neither practical nor feasible at this time. There is no urgent, well-defined demand for an innovation which on the one hand imposes a heavy tax upon a large nonparticipating constituency, and on the other intends to serve only a comparatively small number of beneficiaries.

While it is true that the Wisconsin Federation of Labor and State Medical Society have gone on record in favor of the principle of health insurance, investigation among individual members of both organizations shows a woeful lack of knowledge or information on the subject, with no definite plan for the practical operation of such a law.

Outside of these two organizations, the committee has been unable to find that there is any demand for the proposed legislation. In fact, the committee was at a disadvantage at all times during its investigations because the public generally knew nothing about the subject and the few who did appear at the hearings had only very meager information.

The committee has not been convinced from the evidence presented that there is any necessity for such an act. The wage earners of the State are on the whole thrifty and independent, and they have not sought paternalistic direction or aid in their private affairs and home life. We believe that the Liberty Loans and Thrift Stamp campaigns have produced a remarkable development in the saving habit, especially among the wage earners, which will further aid this group to tide over periods of sickness.

The climatic conditions of the State are conducive to health and longevity; the average housing is sanitary and the general living habits of the people are commendable. There are no fever-ridden lowlands, nor are the cities afflicted with slum districts. Consequently, the health status of the State compares most favorably with that of other States. In fact, there are no extraordinary conditions which would justify unusual relief measures.

In brief, there are no outstanding social or economic conditions in Wisconsin at this time which would make health insurance, as a compulsory measure administered by governmental authority, either necessary or expedient.

If health insurance, which admittedly possesses the ring of human appeal, were really deemed a necessity in relieving distress and raising standards of physical efficiency, it could not at this time under the constitution of the State be made a com-



pulsory act. At best it would have to remain a voluntary instrument until an amendment to the constitution would enable the legislature to adopt a compulsory system.

The suggestion that such voluntary system could be made effective through the application of the ingenious devices which now characterize the workmen's compensation act will hardly hold. True, the compensation act is a voluntary instrument, but its successful operation is not due so much to the device which brings industrial forces automatically under its operation, unless definite objection is filed, as it is to the ready acceptance by both employer and employee.

A voluntary health insurance law would not meet with the same ready acceptance because it involves wider and deeper considerations. It is on the whole a greater project from an economical point of view, and carries with it serious and complicated administrative considerations.

The controlling feature in the compulsory health insurance movement should, after all, be in the direction of prevention rather than cure. While its immediate object is to afford temporary relief, financial and physical, to the man who is ill, its ultimate aim should be to establish surroundings and a mode of life that will insure bodily health and vigor.

The question, therefore, "Shall the effort of the State and of private management be directed chiefly toward prevention of sickness, or instead, toward relief through treatment and compensation after disability arises?" is both timely and reasonable. Or in the language of another authority "Any system of health insurance for the United States or for any State should have at its inception prevention of sickness as one of its fundamental purposes." Thus the problem is summed up in the final query "Is it more humanitarian to indemnify or to prevent?"

This being the real problem, it also follows that the State which is deeply concerned in the physical and moral welfare of its citizens must strive toward preventive measures of a permanent nature, rather than trifle with curative expedients.

If the State of Wisconsin has not as yet, through proper legislation, realized her own possibilities in raising the health standards of her population to their highest attainable point, then the opportunity to do so is still within her grasp. If her climatic conditions, the living habits of her people, together with incomplete statutory regulation, have produced results far more favorable than those attained by the country at large, then it also logically follows that the attainment of more complete regulation in these directions is in order. Hence, it would seem wise to hold that the expenditure of \$1,000,000 for preventive measures will serve the cause of public health in the State more effectively than the expenditure of twenty times that sum in an experimental curative.

The remarkable results being obtained in this State by means of preventive work inaugurated by the State and local health departments are more than gratifying, considering the limited appropriations available for the purpose.

The speedy adoption by the other large cities in the State of the public nurse system, which is already rendering such efficient preventive service in Milwaukee, will do much to solve the problem of sickness at large.

While the committee recognizes that sickness of the wage earner with the consequent loss of wages is a problem more or less serious in our State, it is not satisfied that health insurance would be a proper remedy.

The committee feels that before adopting legislation of this nature, with its cumbersome and coercive administrative features, an effort should be first made to extend and make more efficient our present preventive agencies.

A more liberal attitude in appropriations to our State and local boards of health will do much in solving the health problem. The machinery of these agencies is already in operation, and but little, if any, legislation would be necessary to extend the scope of their work.

We believe that prevention rather than indemnification is a better solution of the problem.

We see no reason why sickness of the wage earner can not be fully met by diminishing illness, without attaching at the same time to this effort a complicated plan of insurance as contemplated by the proposed health insurance legislation.

Practically all the provisions of the so-called standard bill refer to the method of inaugurating the insurance system and the question of the prevention of illness receives but little, if any, consideration.

Since any compulsory health insurance measure which contemplates a contribution to the fund on the part of the State will first require a constitutional amendment, the committee in the meantime offers the following suggestions:

1. We urge upon the legislature the necessity for more liberal appropriations for the support of the State board of health and the encouragement of correspondingly liberal appropriations on the part of the local boards of health, including the appointment of a paid county health officer in every county of the State. We also deem it advisable to direct special attention to the State health laboratories, with the hope that they may be made in the course of time centers of preventive medicine and become useful in the possible future development of so-called group medicine.

2. We urgently recommend the universal introduction of physical and medical examinations into all the public schools and other State educational institutions of Wisconsin. We have arrived at the opinion that a reorganized State health service must rest primarily upon adequate methods of child and school hygiene, including the periodical physical and medical examination of all children during the period of school life.

3. As a means of securing more adequate care, especially during prolonged illness, we are of the opinion that the legislature should give encouragement to the establishment of district nursing centers of various types best adapted to local requirements.

4. The reduction of infant mortality should be made a part of the public health program and we recommend that a bureau of child welfare be established in connection with the present State health organization.

5. The legislature also should give liberal encouragement to the development of financial community support of hospitals and sanatoria, as most urgently called for by local conditions, subject, of course, to wide variation throughout the State. We, however, feel that every county should have not less than one (1) thoroughly equipped modern hospital for general purposes.

6. While our investigations have not disclosed very serious deficiencies in the housing of our wage earners, we are of the opinion, nevertheless, that the legislature should provide for the adoption of a comprehensive housing plan adapted to the future needs of our growing industrial population. The relation of ill health to unsanitary methods of housing is so clearly established that it requires no arguments to reemphasize the urgency of this recommendation by an appeal to the facts, which are understood by all who have given the matter serious consideration.

7. We are of the opinion that occupational diseases should be included in the workmen's compensation act, and recommend that proper legislation to this end be enacted.

8. Finally, we would recommend that the State insurance department concern itself more actively with the supervision and control of voluntary insurance undertakings having for their object the pecuniary relief or medical attendance, or both, of wage earners during more or less prolonged periods of illness. It seems to us that a standardized plan of organization and procedure might be worked out under the direction of the insurance commissioner, and recommended to the wage earners of the State as well as to the employers of labor for individual or collective adoption.

## MEMORANDUM OF MINORITY.

In submitting its report the minority made the following comments:

The committee appointed pursuant to joint resolution No. 5A (1917) and chapter 604, Laws of 1917, since its creation has held a few hearings and attended one conference each in Philadelphia, Pa., and Cleveland, Ohio. The decision of the committee at its first meeting, to devote itself mainly to the subject of health insurance, was not because accident, invalidity, old age, unemployment, and mortuary were not subjects which merited attention, but only to stay within the appropriation. These matters should be given close consideration by the legislature and laws should be enacted to extend to the workers necessary safeguards.

At the hearings little was brought out which had not already been presented in volumes of literature on the subject of health insurance.

The legislature did not create this committee particularly to ascertain the constitutionality of bill No. 610A, which I introduced in the 1917 session of the legislature, or the so-called standard bill tentatively adopted by the American Association for Labor Legislation. If this bill is, as stated by the majority committee, constitutionally defective in some particular instance, it does not imply that it can not be made adaptable to Wisconsin laws, or that Wisconsin laws may not be fitted to the social needs of the State, and that it was not within the scope of the committee to so recommend.

The majority of the committee makes certain recommendations based on the supposition that "any compulsory health insurance measure which contemplates a contribution to the fund on part of the State will first require a constitutional amendment."

At least one State has adopted a plan which eliminates the State as a contributor, although I am inclined to think that participation in the fund on part of the State would be held to be of a public nature and therefore valid in law.

At the last meeting of the committee, held January 7, 1918, I was requested to eliminate criticism of the report of the majority. If I refrain from doing so to any considerable extent it is because I believe that the position of the majority relative to the feasibility of the plan contained in the standard bill is obviously untenable. I can not agree, for instance, that the "voluntary thrift" of the people of Wisconsin and the hardiness of the woodsmen of the last generation make health insurance to-day undesirable or unnecessary.

It has been said that the working people of the State do not understand the plan proposed in the standard bill. This argument may likewise be applied to the compensation law, inasmuch as a great number are not conversant with the details of the act, and yet they would not tolerate its repeal because of its general beneficial nature.

I have interviewed numerous representatives of labor and individual workers, and the consensus is favorable to the plan of State health insurance. There seems to be no disagreement as to the necessity of greater attention to the health of the people of the State, and I am confident that the so-called standard bill generally is feasible and will supply that need.

I can not join in the findings and conclusions of the majority of the committee, and, therefore, recommend that a compulsory health insurance law be enacted embodying the general scheme of bill 610A, introduced in the 1917 legislature.



**RIGHTS OF BENEFICIARIES UNDER WAR-RISK INSURANCE ACT.**

To correct an erroneous impression among relatives and beneficiaries of men in the military and naval service as to their rights under the War-Risk Insurance Act the Secretary of the Treasury has issued the following statement:

Considerable confusion and much misunderstanding seems to prevail among the relatives and beneficiaries of men in the military and naval service as to their rights under the War-Risk Insurance Act. Many mothers and fathers named as beneficiaries of the Government insurance applied for by their sons have gained the impression that they must prove dependency in order to receive payments of insurance. This is an entirely erroneous impression probably due to a confusion of the insurance and compensation provisions of the act of Congress of October 6, 1917, and to a mistaken assumption that the terms "insurance" and "compensation" are used interchangeably, whereas they represent two entirely separate and distinct benefits.

Insurance is payable regardless of any dependency and a beneficiary designated in an application for Government insurance, if within the permitted class of spouse, child, grandchild, parent, brother, or sister is entitled to receive the insurance in monthly installments without proving any dependency upon the insured.

"Compensation," however, which is separate and apart from insurance and takes the place of the pensions provided under the old pension system is payable only to a wife, child, dependent mother, or dependent father of a man who is disabled or dies as a result of injury suffered or disease contracted in the line of duty while employed in the active service. Compensation may be payable in addition to insurance, but a mother or father must prove actual dependency in order to receive monthly payments of compensation, although they will receive the insurance in monthly installments if named as the beneficiary thereof whether they are dependent or not.

No dependency need be shown by any beneficiary in order to receive the Government insurance, but a mother or father must prove actual dependency upon their deceased son for the necessities of life in order to receive the additional payment of compensation.



## LABOR LAWS.

### WORKMEN'S COMPENSATION LAW OF ARGENTINA.<sup>1</sup>

The compensation law of Argentina, which went into effect January 14, 1916, presents a few unique features in this class of legislation.

Under its provisions every employer, whether an individual or corporate body, is responsible for injuries or death of persons employed, occurring while engaged in and performing labor, whether arising out of or in the course of such employment or due to a fortuitous occurrence or to a force majeure inherent in the employment.

The act covers employees and laborers earning not more than \$3,000 Argentina money<sup>2</sup> and who are employed in any of the following enterprises: (1) Factories, workshops, and in general all industrial establishments using other motive force than man power; (2) construction, maintenance, and repair of buildings, railroads, docks, dikes, canals and similar works; (3) operation of mines and quarries; (4) transportation, loading, and unloading; (5) manufacture or use of explosives, or inflammable materials or electricity; (6) forestry (lumbering) and agriculture, but only persons engaged in transportation service or in operating mechanical motors; (7) installing, repairing or dismounting telegraph or telephone systems or lightning rods; and (8) every other similar industry or undertaking which under the advice and recommendation of the department of labor shall at least 30 days prior to the occurrence of the accident have been declared by the executive to be included.

No compensation is payable unless the injury causes a loss of 6 working days, nor is the employer liable for injuries or death arising from (1) the intentional act of the injured or deceased, or due to his grave misconduct, or (2) by a force majeure foreign to the employment. The fact that the injured man was working under the supervision of a contractor does not relieve the employer of responsibility, except that in forestry or agriculture the contractor becomes responsible for accidents due to the use of mechanical machinery exclusively and directly owned by him.

Responsibility may be transferred to an insurance company, or an employers' mutual association complying with the following requirements: (1) Maintaining a deposit in the National Bank of \$50,000

<sup>1</sup> Colección Legislativa de la Republica Argentina. Leyes Nacionales. 1915. pp. 60 ff. Buenos Aires, 1917.

<sup>2</sup> In this article, up to the section "Financial operations, 1916," all money is Argentina paper money. The Argentina paper dollar is equivalent to 42.5 cents United States currency.

Argentina money; (2) providing such funds by an established scale of premiums as will be required to fill its obligations; (3) instituting a reserve fund as fixed by the executive, and based on risks accepted by the company; (4) exclusion of all clauses relative to the age of the insured; and (5) maintaining a separate account of operations under this law.

The amount of compensation provided for is as follows:

(1) For death, funeral expenses, not exceeding \$100 Argentina money and to the family an amount equal to the earnings of the deceased for the 1,000 days of work next preceding the date of the accident, not exceeding \$6,000 Argentina money. Dependents are limited to the surviving consort, and children under 16 years of age; ascendants, grandchildren, brothers and sisters under 16 years of age, living with and dependent upon the deceased at the time of the accident.

(2) For permanent total disability, a sum equal to the compensation payable in case of death.

(3) For permanent partial disability, a sum equal to 1,000 times the reduction in daily earning capacity.

(4) For temporary disability, one-half wages during the period of incapacity. Temporary disability lasting more than one year is considered permanent, and compensated as such, less any compensation paid for temporary disability.

The Executive is authorized to determine by regulations the degrees of incapacity.<sup>1</sup>

The obligation of employers and insurers (except in case of simple temporary incapacity which is paid for directly by the employer)<sup>2</sup> shall cease only upon the payment of the compensation awarded into the National Annuity and Pension Fund, to be invested in bonds of the national debt. The accruing interest shall be paid in monthly installments as compensation due the claimant.

A guaranty fund is provided for, constituted by (1) compensation due on account of death, no dependents being found; (2) annuities remaining unpaid by reason of the death of claimants; (3) compensation or annuities unpaid because the claimant leaves the country; and (4) fines collected for contraventions of this law. This fund is formed exclusively for payment of the expenses of the accident bureau, and to satisfy claims unpaid by reason of a judicial decree of absolute insolvency of the responsible party.

Compensation payments provided for are subject to no writ of attachment or distraint, nor are they transferable or subject to compromise or renunciation, nor can an employer be relieved of responsi-

<sup>1</sup> This has been done. See p. 276.

<sup>2</sup> *Crónica Mensual del Departamento Nacional del Trabajo*. Buenos Aires, May, 1912.

bility by any stipulation, and all agreements in conflict with the law are declared null and void.

Upon the failure through fraud or negligence of the employer to pay compensation the claimant may elect to recover under this law or the common law, but the election of either forfeits, ipso facto, all rights under the other, and the acceptance of any sum under either limits his rights to proceedings under that method.

In case of bankruptcy of an insurance carrier, the share of the assets belonging to the workmen's compensation fund shall be refunded to the insured employer, as determined by his rights in equity or passed to the credit of the annuity and pension fund.

Occupational diseases causing incapacity or death are compensable when the disease was contracted during the year previous to the incapacity or death and originated exclusively in the exercise of the occupation. The last employer is held responsible unless it is proved that the disease was contracted while employed by another, in which case the latter becomes responsible. If contracted gradually the other employers for whom the claimant may have worked during the year are required to share in the payment. In case of disagreement as to the amount of responsibility of each the question must be submitted to arbitrators.

The same scale of compensation applies to occupational diseases as to accidents. The Executive is authorized to prepare a schedule of occupational diseases. This becomes effective 90 days after publication.<sup>1</sup>

All accidents resulting in injury or death and occupational diseases producing incapacity or death are required to be reported to the department of labor by the injured or incapacitated person, or in case of death, by his dependents and also by the employer.

The executive is directed to prepare a list of accident-prevention measures to be adopted in industrial operations recognized as dangerous, and employers are required under penalty to install such measures.

#### INTERPRETATION OF THE LAW.

The following interpretation of this law is taken from a work by Alejandro M. Unsain, which gives at length an exposition of the law.<sup>2</sup> This law is national in its scope. The executive is charged with formulating regulations thereunder for the Federal district and the national territories, while each province may issue regulations for its enforcement within its own area. The fact that a province fails to issue such regulations does not in the least diminish the rights of employees nor the responsibility of employers.

<sup>1</sup> See *Accidentes del Trabajo, Exposicion y Comentarios*, by Alejandro M. Unsain, p. 278.

<sup>2</sup> *Accidentes del Trabajo, Exposicion y Comentarios*, Alejandro M. Unsain. Buenos Aires. 289 pp.



#### Industries Covered.

The law enumerates the classes of industrial establishments covered by it, but some provinces have issued regulations in much greater detail.

#### Classification of Injuries.

The Province of Buenos Aires enumerates the various classes of compensable injuries as: Traumatic lesions; wounds and bruises, internal or external; articular dislocations; deformities, fractures, loss of parts, mutilations, loss of functions due to traumatism, toxic poisoning from gases, etc.; burns and scalds from heat or acids; lesions and disorganized functions due to electricity, light, high or low temperature; and other injuries, including acute infections from absorption of any infectious materials with which a laborer has been brought in contact or any contagious disease directly and exclusively due to work being performed.

#### Method of Determining Earnings.

The regulations issued by the executive for determining the annual earnings as a base for computing compensation provide that the fixed wages, value of rent of living quarters furnished by the employer, food, light and fuel, all bonuses, premiums for economies in use of materials, extra pay for extra hours, night or holiday work, shall be considered.<sup>1</sup> If these amount to more than \$3,000 Argentina money the employee is not covered by this law. The employer however, is not exempt from responsibility, as the injured person retains his rights under the civil law.

#### Medical Aid.

Medical aid and medicines until death, recovery, or declared permanent disability are required to be furnished at the expense of the employer regardless of the man's annual earnings.

#### Insurance.

Employers carrying policies issued by a recognized insurance company covering industrial accidents are exempt from further responsibility. However there is no obligation of insurance nor is there any requirement that if insurance is effected it shall be with a recognized company. Before any policies are issued their form and conditions must be approved by the executive.

#### Compensation.

*Burden of compensation.*—Because the law is silent in regard to assessing a portion of the insurance premiums, or in withholding a portion of wages, a few establishments have compelled their em-

<sup>1</sup> The average earnings of male laborers in the Federal capital is approximately \$4 per day—\$1,200 per year.



ployees to contribute. It is clearly the meaning of the law, however, that the entire burden of accident compensation shall rest upon the employer.

*Methods of payment.*—Attention is called to a defect in the law, in that the compensation having been deposited in the annuity fund as provided, is required to be “invested in bonds representing the national debt,” and “this fund shall pay monthly to the claimants the interest accruing on the sum invested.” These bonds yield about 5.6 per cent annual income, and as this constitutes the entire annuity payable to a dependent mother and children, the compensation provided is but a monthly pittance. Thus if the average daily wage in the Federal capital is approximately \$4 per day, the compensation required to be deposited is \$4,000. The monthly allowance based on accruing interest would equal less than \$19 per month, “an income far inferior to the needs of a family” whose monthly income heretofore has been \$100.

Article 17 of the law provides that the claimant “may elect to claim compensation under this act or under the common law.” If a claimant considers the rate of compensation small, or the accident occurred in some line of work not covered by this law, or if the workman was earning wages greater than \$3,000 per year, or the accident resulted from the evident culpability of the employer, action may be commenced under the common law. Certain employers have resorted to methods of settlement “hardly honest.” The employer who is being required to pay \$4,000 into the accident fund offers a dependent family a cash settlement of \$2,000. In view of the small annuity accruing from the investment in bonds and that minors’ annuities cease upon their reaching 16 years of age, claimants are easily convinced that a compromise is much more advantageous, and are persuaded to base their claim on the common law. The proposition is perfectly legal, provided the claimant specifies that the settlement is based on the common law. The regulations, however, contain a provision intended to prevent employers from taking undue advantage of this situation, by inserting a clause providing that “such settlements effected through misrepresentation, fraud or deceit do not irrevocably renounce the claimant’s right to benefits under the compensation law.”

In a case<sup>1</sup> where compensation became payable by an insurance company the company deposited in the proper fund the amount of compensation due under this law. Before the deposit was made the claimant had notified the company of his election to initiate proceedings under the common law. The matter was referred to the

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<sup>1</sup> *Cronica Mensual del Departamento Nacional del Trabajo*, May, 1918, p. 65.

Procurador General who decided that the company should not have made the deposit, but have paid it directly to the claimant.

In another case<sup>1</sup> the sum of \$5,000 had been regularly deposited as compensation for death. The widow petitioned the Procurador General demanding the immediate payment of \$1,000 of this sum. It was ordered that the petition be granted.

The Province of Buenos Aires has endeavored to amend the situation by leaving to the judgment of the department of labor the question as to whether "the compensation shall be distributed among the dependents, or invested in national or provincial bonds." The factors to be considered are: (1) The amount of compensation; (2) advantages to be derived by acquiring a dwelling, establishing a business or industry; (3) the number of children belonging to the claimant, their ages and their educational requirements; and (4) circumstances peculiar to each case. These modifications (according to Unsain) are clearly in conflict with the law. Its defects can be remedied only by the national congress.

*Degree of incapacity.*—The National Executive under authority of article 12, has issued a schedule designating such injuries as are considered as producing partial and total incapacity, respectively. This has been based not alone upon the severity of the injury but also upon the age and sex of the injured person.

The following classes of injuries are considered as resulting in total permanent incapacity: (a) The loss of both arms, or of their essential parts; of both legs; or of an arm and a leg. A hand or a foot is understood to be an essential part. (b) A functional injury to these members producing results equivalent to their loss. (c) Loss of both eyes, or total loss of sight. (d) Loss of one eye, and an important loss of visual power in the other. (e) Incurable mental derangement. (f) Incurable organic or functional lesions of the brain, circulatory or respiratory system, whether resulting directly, or indirectly from mechanical or toxic action. (g) Hernias, inguinal or femoral, simple or double.

Cases resulting as follows are also considered as permanent total disability: (1) Injury to a member producing partial incapacity, when in connection therewith other bodily injuries reduce the capacity for work 50 per cent. (2) When capacity for work by the combined injuries is reduced 42 per cent, and the injured person is over 50 years of age. (3) When the reduction of capacity amounts to 36 per cent and the age exceeds 70 years. When the injured person is a female, the per cent of reduction in capacity producing total permanent incapacity is specified in the law as being 2 per cent less in each of the three cases above mentioned.

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<sup>1</sup> Cronica Mensual del Departamento Nacional del Trabajo, May, 1918, pp. 66.

Before the law was passed, insurance companies issued policies containing a clause specifying that no compensation was payable to a person injured after having reached the age of 55 or 60 years. This law prohibits such stipulations. As a result certain important enterprises refuse to give employment to persons over 50 years of age.

In the matter of partial disability the regulations provide that the following percentages of the salary received during the year immediately preceding the injury be paid as compensation for the injuries specified:

Loss of either arm, fore arm, hand, thigh or leg, 60 per cent; of either foot, 50 per cent; of either thumb, 30 per cent; right index finger, 24 per cent; left index finger, second phalange of the right index finger, and double hernia, inguinal or femoral, 18 per cent; loss of sight of either eye or total deafness, 42 per cent; loss of hearing of one ear, or simple hernia, 12 per cent; loss of the second phalange other than above mentioned, 9 per cent; one phalange of any other finger or toe, 6 per cent.

The Province of Buenos Aires in adopting this schedule specifies, however, that the percentages indicate the minimum compensation to be paid.

*Time of payment.*—Both the law and regulations are silent relative to the time when the compensation is payable. In the case of death it has been held that compensation must be paid within 30 days following the accident. In case of total disability the practice has been to make the deposit within 30 days after the degree of incapacity has been determined. In the case of other compensable injuries, payments are usually made weekly, semimonthly, or monthly, according to the periodic payment of wages in the establishment in which the accident occurred.

#### The Accumulating Fund.

Another peculiarity, not to say defect, in the law, is the failure to provide for the final disposition of the constantly accumulating fund, formed by this deposit of the original contribution for establishing annuities, and the accruing interest on lapsed annuities. Only the interest on each deposit can be distributed. This ceases at the death of the beneficiary, and, in the case of minors, upon their reaching the age of 16 years, and the deposit and accruing interest revert to the fund.

There is built up through this system, at the cost of the depositor and without any advantages to the claimants, a reserve for the exclusive benefit of the fund, which becomes an accumulating alienated fund subject to no withdrawals for any purpose, upon which no one can have any legal claim and on which the interest continues.



Another feature is the implied theory that "the death of a laborer works destruction of a specific and valuable economic factor." In cases in which there are no claimants the employer is required to pay for this loss by depositing in the guaranty fund a stipulated sum as an equivalent of "value destroyed."

The functions of the two funds created by this law are entirely distinct. The accident fund receives the compensation payable because of total or partial incapacity, or of the death of an employee leaving dependents, converts the compensation into Government bonds, and distributes the interest among the dependents. The guaranty fund receives specific classes of compensation. It is under no obligation to invest this fund in any interest-producing securities, and the fund can be drawn upon to pay benefits only when a judicial decree of the insolvency of the responsible parties has been issued.

The only deposits which are being paid into the national accident fund are those due for accidents occurring in the Federal capital, the Territories and Provinces not having as yet adopted regulations.

No demand has been made on the guaranty fund, and all indications warrant the conclusion that in a few years a large and absolutely unemployed and unproductive fund will be established, which it will become necessary to devote to some useful purpose.

#### Inherent Occupational Risk.

This law is founded on the principle that there is an inherent occupational risk in all industrial undertakings, and assumes: (1) That every injury to an employee during the time in which he is employed, by reason of or in the exercise of his occupation, is the result of an industrial accident. (2) That the employer is responsible for every accident, the burden of proof resting upon him in cases where culpability of the employee is alleged.

#### Occupational Diseases.

The National Executive is authorized to determine by a decree such diseases as are to be recognized as occupational diseases. By decree of January 14, 1916, certain diseases arising from the inhalation of or as a result of coming in contact with gases, dust, poisonous fumes, etc., are designated as compensable occupational diseases.

In cases of anthrax and bubonic plague,<sup>1</sup> the court, in the former, and the bureau of hygiene, in the latter, have held that they are not occupational diseases, but industrial accidents and compensable as such.

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<sup>1</sup> *Cronica Mensual del Departamento Nacional del Trabajo*, May, 1918, pp. 79, 80.



FINANCIAL OPERATIONS, 1916.<sup>1</sup>

During the year ending December 31, 1916, 10 recognized insurance companies in the Federal capital issued 7,472 policies covering 199,233 laborers whose annual earnings were calculated as amounting to \$128,740,639. These companies paid compensation amounting to \$596,647, of which \$211,654 was paid as death claims, \$104,335 for injuries resulting in permanent incapacity, and \$280,658 for cases of temporary incapacity.<sup>2</sup> During the year 1917 the 10 recognized insurance companies issued 5,194 policies, covering 151,593 laborers, whose yearly wages were estimated \$104,801,264. Premiums paid amounted to \$1,929,945. Compensation on account of deaths due to accidents amounted to \$167,098, for partial and permanent incapacity \$112,450, and for temporary incapacity \$300,211.<sup>3</sup> The sum paid into the National Retirement Fund for the payment of compensation of accidents occurring during the year was \$416,340, of which \$228,458 was deposited by insurance companies and \$187,882 by employers.<sup>4</sup>

In the first four months of the year 1918<sup>5</sup> the deposits in the accident fund for the payment of indemnities for injuries resulting from industrial accidents reached the sum of \$257,779. Of this amount \$153,171 was for the payment of compensation in 47 cases of death, an average of \$3,371 per death; \$5,244 in the one case of permanent total disability; and \$99,364 in 157 cases of permanent partial disability, or an average of \$633 per case.

No data are available relative to the number of cases of temporary incapacity, as in such cases the compensation is paid by the employer directly to the injured person.

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QUEENSLAND COMPENSATION ACT AMENDED.<sup>6</sup>

A number of amendments, some of them of considerable importance, were made to the compensation act of Queensland by an act of November 23, 1918. One change involves the substitution of industrial magistrates appointed under the Industrial Arbitration Act of 1916 for referees, for the hearing and determination of disputes as to awards, etc. The list of occupational diseases for which compensation is to be paid is increased by adding copper, zinc, or

<sup>1</sup> All amounts given below are Argentina gold money. The Argentina gold dollar is equivalent to 96.5 cents, United States currency.

<sup>2</sup> *Accidentes del Trabajo*, p. 125.

<sup>3</sup> *Boletín de Industria Comercio y Trabajo*, August, 1918, Mexico, p. 66.

<sup>4</sup> *Boletín de la Unión Industrial Argentina*, October, 1918, p. 47.

<sup>5</sup> *Cronica Mensual del Departamento Nacional del Trabajo*, May, 1918, p. 68.

<sup>6</sup> Data from *Queensland Industrial Gazette* (Brisbane), Feb. 10, 1919, pp. 146-148. Published by the Queensland Department of Labor.

other mineral poisoning to the group already covered. Miners' itch, copper itch, dermatitis caused by working in mineralized or acid water, and caisson disease are added to the table of compensable mining diseases.

A departure from previous administrative methods is found in the enactment of a schedule of awards for designated injuries, the amounts being fixed by the act, and to be paid on this basis and not on the basis of wages earned. As enacted in 1914 the schedule fixed a percentage rate only, but the amendments set forth only the sums fixed.

The table below presents the awards, converted from pounds and shillings to the nearest dollar, and the percentage each one is of a total disability.

AMOUNT PAYABLE FOR EACH SPECIFIED KIND OF INJURY AND THE PERCENTAGE EACH IS OF TOTAL DISABILITY.

Nature of injury.	Amount payable.	Per cent of total disability.	Nature of injury.	Amount payable.	Per cent of total disability.
Loss of—			Loss of—		
Both eyes.....	\$3,650	100	Foot or the lower part of the leg.....	2,190	60
An only eye.....	3,650	100	Sight of one eye, with serious diminution of sight of other eye.....	2,737	75
Both hands.....	3,650	100	Hearing.....	1,825	50
Both feet.....	3,650	100	Hearing of one ear.....	365	10
A hand and a foot.....	3,650	100	Sight of one eye.....	1,460	40
Mental powers, involving inability to work.....	3,650	100	Thumb of the right hand.....	1,095	30
Use of limbs or mental powers by paralysis.....	3,650	100	Thumb of the left hand.....	912	25
Right arm or greater part thereof.....	2,920	80	Forefinger of the right hand.....	730	20
Left arm or greater part thereof.....	2,737	75	Forefinger of the left hand.....	547	15
Right hand or five fingers thereof or lower part of right arm.....	2,555	70	Joint of the thumb.....	547	15
Same for the left hand and arm.....	2,372	65	Little finger.....	438	12
Leg.....	2,737	75	Middle or ring finger.....	292	8
			Great toe.....	730	20
			Joint of great toe.....	365	10
			Any other toe or a joint of a finger.....	182	5

## GOVERNMENT BUREAUS.

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### PLAN FOR PROMOTIONS AND INCREASES IN SALARIES OF NONTECHNICAL EMPLOYEES OF UNITED STATES HOUSING CORPORATION.<sup>1</sup>

In the formulation of any thought-out plan for governing promotions and increases of nontechnical employees of the Housing Corporation receiving \$2,000 or less a year, allowance must be made for time and experience to adjust such a plan to the varying circumstances of individual employees. Only after its operation is closely studied can such a plan be made to fit in with exceptional conditions it is likely to encounter.

The committee realizes that the application of any system must be experimental for some months. For this reason it recommends that its operation be given close study and that the entire ground of its experimentation be thoroughly reviewed at the end of six months or a year. It is possible that at the end of that period it may be necessary to make such revisions as the developments of particular instances show to be necessary.

In formulating this proposed plan for governing promotions and increases of nontechnical employees the committee has made diligent inquiries of numerous other departments of the Federal Government with the view of securing some guidance toward the attainment of its object, but it has been able to secure very little assistance in this direction. All these other departments or bureaus appear to be and have for years been confronted by problems somewhat similar to those now facing the Housing Corporation, and your committee expresses its surprise at finding that no intelligent or satisfactory plan, as far as it has been able to learn, has yet been worked out in any of these departments. There is very great need for such a plan as your committee has tried to formulate. The fact that your committee seems to have had set for it a task which it has had to perform largely without the experience of other departments to assist it is called attention to here as explanation in part of some of the difficulties that confronted your committee.

The committee believes fundamentally that promotions and increases in salaries should not depend either upon the initiative of the employee or of his or her direct superior but rather that they should occur automatically, thus assuming the continued performance of his or her duties in an able and efficient manner. The action of the

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<sup>1</sup> Prepared by the committee on salaries and personnel of the United States Housing Corporation.

employee's superior officer should be negative rather than affirmative—that is, any action taken by him should be in the direction of interfering with automatic promotion and increase by an adverse report as to the employee's ability and efficiency, these latter being assumed when not so adversely reported upon. With this principle as the basis the committee recommends the following:

For the present the salary of \$900 a year is recognized as the minimum for all nontechnical employees with the exception of messengers and night telephone operators. It may be necessary to increase this minimum upon investigation of the facts. Such an investigation the committee expects to have made.

The annual salary of each employee receiving from \$900 up to but not including \$1,400 is automatically to be increased at the end of every six months of service in the amount of \$50, dating from the date of appointment.

The annual salary of each employee receiving from \$1,400 up to but not including \$1,600 is automatically to be increased at the end of each year of service in the amount of \$100, dating from the date of appointment.

The annual salary payable to a typist is limited to \$1,400.

The annual salary payable to a stenographer is limited to \$1,600.

The annual salary payable to a secretary is limited to \$1,800.

The classification of secretary should be given a clear and definite status. To this end, the committee suggest that a secretary be regarded as an employee of a division or of an administrative or executive branch of the corporation who is called upon at times by the head of a division or an administrator or executive to conduct the division or the duties of a particular office during the absence of the head. In brief, a secretary is a regular employee to whom the chief of the division or the executive intrusts unusual responsibilities. While the salary of the secretary is herein limited to \$1,800 a year, in cases of employees of this class who exhibit exceptional ability and who, in the judgment of the head of the division or executive, deserve a higher compensation, then such an employee is to be given the title "assistant to the chief" or "assistant to the manager," with a salary commensurate with the duties and responsibilities of the position.

The primary value of some such plan as is herein proposed is that it tends to eliminate all favoritism or undue influence. Instead of increases and promotions depending, as now, largely upon the initiative of the employee and the favorable recommendation of his or her superior, they follow automatically, the assumption being that the continuance of the employee in his or her position of itself is a recommendation of continuing ability and efficiency. A report to the



contrary to the chief clerk automatically drops the employee from the pay roll of the corporation. Thus incompetents are weeded out not only within a reasonable time after their first employment but also by preventing their entrance into a higher class with larger compensation.

Such a plan also removes any uncertainty the employee may have as to recognition of increasing ability and efficiency. He or she knows that evidence of these qualities in the work performed is alone necessary to an increase in salary or a promotion to a higher position; that its absence means dismissal. Thus, automatic removal from the service of the corporation is provided for in case the employee does not indicate ordinary attention in the performance of his or her duties, and this in itself removes the necessity of any personal adjustments on the part of the heads of divisions. This plan is based on the belief that such an employee is worth to the Housing Corporation \$50 more at the end of six months or \$100 more at the end of a year, and that if he or she is not that much more valuable, then such an employee should not be continued in the service of the corporation. Under the present system, or lack of system, there is no assurance to the employee, other than the personal opinion or influence of the head of the division, that ability and efficiency will be properly recognized. We believe this plan will not only stabilize the personnel, which of itself is an asset, but that it will continue the more able employees in longer terms of service and will attract others to the corporation.

In the formulation of this plan for governing increases and promotions for nontechnical employees of the Housing Corporation the committee has had in mind the enactment of the Sixty-fifth Congress, approved March 1, 1919, and entitled "An act making appropriations for the legislative, executive, and judicial expenses of the Government for the fiscal year ending June 30, 1920, and for other purposes." This act provides, in substance, that "all civilian employees of the Government of the United States and the District of Columbia who receive a total of compensation at the rate of \$2,500 per annum or less, except as otherwise provided in this section, shall receive, during the fiscal year ending June 30, 1920, additional compensation at the rate of \$240 per annum." Numerous exceptions are made to this, but for our present purpose only the following are important:

Excluded from the application of the act are "employees paid from lump-sum appropriations in bureaus, divisions, commissions, or any other governmental agencies or employments created by law since January 1, 1916." Such a provision would seem to exclude employees of the Housing Corporation from the benefits of this act. A similar effect seems to be also involved in the clause of the act excluding from

its application "persons employed by or through corporations, firms, or individuals acting for or on behalf of or as agents of the United States or any department or independent establishment of the Government of the United States in connection with the construction work or the operation of plants." If the basis of the act referred to rests on justice, your committee sees no reason why the principle should not be made applicable to employees of the Housing Corporation. The adoption of the plan herein suggested for governing increases in salaries and promotions of nontechnical employees receiving \$2,000 or less would seem to your committee to apply this principle to corporation employees. It is true the total amount is not given at one time or in any one year, but over a period of years this amount, and even more, is secured by the capable and efficient employee who continues in service.

The committee does not believe it conducive to the efficiency or the esprit de corps of the personnel to reduce salaries. It believes, on the contrary, that a situation such action may be designed to remedy, if such a situation exists, can better be met by dispensing with the services of such employee or employees.

It has been found necessary in the past, and may no doubt be found necessary in the future, although possible to a lesser extent, to require of nontechnical employees a certain amount of extra work or overtime. This overtime employment is to be limited to the absolute minimum. In cases where it is found necessary, then, the employee is to secure time off from work at such time as a slackening in the duties of her regular employment will permit, such time off being equal to the amount of time given in extra work. Such extra time is not to be considered as a factor in an increase of salary or in promotion to a higher position, although the spirit in which such extra service is performed is to be favorably considered as an element in determining ability and efficiency.

Employees in the service of the Housing Corporation are entitled to a reasonable vacation period, not only for recreation and recuperation but also as a reward for faithful and continuous service. Such vacation, however, should not begin to operate until after the employee has been in the service of the corporation at least six months. As to the length of the annual vacation period, the committee is confronted by a choice between two plans. One of these is to allow a vacation period of 30 days with Saturday afternoon holiday only from the 15th of June to the 15th of September. The other plan is to limit the annual vacation to two weeks and have a half holiday on Saturday the year round. For the present the committee believes that the former plan should be adopted, as this is in accordance with the custom now prevailing in Washington. This vacation is to be

used by the employee when he or she determines, but only upon notification of a sufficient time in advance to the head of his or her division and the chief clerk and with the written approval of both these officials. No employee is permitted to have more days' vacation than are actually due as measured by time of service.

Other things being equal, such as the factors determining ability and efficiency as outlined by the chief clerk, promotions to higher positions are to be based on seniority of service.

Increases in salaries and promotions already made affecting employees of the corporation are to be adjusted to the operation of the plan herein presented.

This plan is to be retroactive in its application in that the time of service of employees subject to salary increases is to begin at the date of their original appointment.

In order to prevent the operation of the plan from becoming too rigid, attention is here called to the possibility of at any time promoting an employee from any position with a comparatively low salary to any other position with a relatively larger salary without the particular employee being limited to the automatic operation of the semiannual or annual increase. As the misuse of this action, however, would seriously jeopardize the value of the plan, such promotions should be made only rarely and then in cases only of exceptional ability and efficiency.

F. J. WARNE, *Chairman.*

HARLEAN JAMES.

J. TUCKERMAN.

Approved:

L. K. SHERMAN, *President.*

APRIL 16, 1919.

## STRIKES AND LOCKOUTS.

### LABOR DISPUTES IN CANADA IN 1918.

The Canadian Department of Labor reports <sup>1</sup> that the number of strikes which began in Canada in 1918 was 191 which, with 5 disputes carried over from 1917, makes a total of 196 in existence in the year. This is an increase of 48, or 32.4 per cent, as compared with 1917. The number of employees involved also showed a large increase over 1917, the figures for the two years being 68,489 and 48,329, respectively. The number of employers involved in 1918 was 766, as compared with 714 in 1917. There was a reduction in total time loss from 1,134,970 days in 1917 to 763,341 days in 1918.

It is stated that 72 disputes, or 36.7 per cent of the total number, were due to requests for increased wages and that 41 disputes, or 20.9 per cent, were due to requests for increased wages and other changes. In 14 cases, or 7.1 per cent, the dispute was against the discharge of employees, and in 12 cases the cause was for recognition of the union. There were 13 sympathetic strikes. Most of the disputes were of minor importance, not more than 1,000 employees being involved in about 89 per cent of the cases and 36.7 per cent were for 5 days or less. In 55 per cent of the disputes the number of working days lost was under 1,500.

As in 1917, Ontario led in the number of disputes, 71, or 36.2 per cent of the total number, occurring within this Province. As to time loss, however, Ontario ranked second, with 17.6 per cent of the total number of working days lost. British Columbia stood first, with 26.4 per cent; interprovincial strikes ranked third, with 13.4 per cent; Quebec, fourth, with 11.3 per cent; and Manitoba fifth, with 10.7 per cent. The class of industry most affected was metals, machinery, and conveyances, 45 strikes, involving 188 concerns and 22,069 workers, whose time losses were estimated at 229,574 working days, being recorded.

Of the total number of disputes 8 remained unterminated at the close of the year. More than one-half, 113, or 57.7 per cent, were terminated in favor of the employees, and 41, or 20.9 per cent, were terminated in favor of the employers. In 21, or 10.7 per cent of the cases, the disputes ended in a compromise, while a like percentage was indefinite or unterminated. Direct negotiations between the

<sup>1</sup> The Labor Gazette, Ottawa, March, 1919, pp. 277-303.



parties brought about a settlement in 102 disputes, or 52 per cent of the total, while 34, or 17.3 per cent, were settled by conciliation or mediation. Twenty-one cases were settled by arbitration and 4 were settled by reference to boards of conciliation under the Industrial Disputes Investigation Act.

The following table shows the number of disputes, the number of employees involved, and the time loss, by industries, in all strikes in Canada in 1918:

NUMBER OF DISPUTES, NUMBER OF EMPLOYEES INVOLVED, AND TIME LOSS BY INDUSTRIES, IN INDUSTRIAL DISPUTES IN CANADA, IN 1918.

Industry.	Disputes.		Number of employees involved.	Time loss.	
	Number.	Per cent of total.		Days.	Per cent of total.
Lumbering.....	2	1.0	1,357	29,407	3.9
Mines, smelters, quarries, clay products, etc.....	36	18.4	13,850	163,585	21.4
Building and construction.....	19	9.7	1,912	18,453	2.4
Metals, machinery, and conveyances.....	45	22.9	22,069	229,574	30.1
Woodworking.....	3	1.5	408	3,432	.5
Pulp and paper.....	7	3.6	2,055	18,305	2.4
Printing and publishing.....	3	1.5	400	3,284	.4
Clothing.....	9	4.6	984	14,156	1.9
Textiles.....	5	2.6	357	16,611	2.2
Foods, liquors, and tobacco.....	8	4.1	1,271	61,869	8.1
Chemicals and explosives.....	1	.5	170	2,040	.3
Leather.....	1	.5	40	400	.1
Transportation.....	16	8.2	8,182	62,875	8.2
Electric railway service.....	4	2.0	3,560	21,540	2.8
Cartage.....	4	2.0	726	4,000	.5
Miscellaneous transport.....	3	1.5	565	7,061	.9
Navigation.....	6	3.1	2,309	19,272	2.5
Public utilities.....	5	2.6	3,091	28,608	3.7
Municipal employment.....	7	3.6	3,861	28,064	3.7
Miscellaneous.....	12	6.1	1,322	30,805	4.0
<b>Total.....</b>	<b>196</b>	<b>100.0</b>	<b>68,489</b>	<b>763,341</b>	<b>100.0</b>

## CONCILIATION AND ARBITRATION.

### CONCILIATION WORK OF THE DEPARTMENT OF LABOR, MARCH 16, 1919, TO APRIL 15, 1919.

Under the organic act of the department, which gives the Secretary of Labor the authority to mediate in labor disputes through the appointment, in his discretion, of commissioners of conciliation, the Secretary exercised his good offices between March 16, 1919, and April 15, 1919, in 94 labor disputes. The companies involved, the number of employees affected, and the results secured, so far as information is available, were as follows:

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 16 TO APR. 15, 1919.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, linemen, Dallas Light & Power Co., Texas Construction Co., Dallas & Wichita Falls, Tex.	60	.....	So far case seems to be deadlocked and the strike threatens to spread to other cities. Pending.
Strike, oil workers, Prairie Oil & Gas Co., Schaffer Oil Co., Oilton & Drumright, Okla.	420	.....	Claims of discrimination not well substantiated, but companies do not welcome the advent of an oil-workers' union. General organizer of oil workers said if the matter had disclosed itself at the beginning as it did after commissioner's arrival he would not have reported it.
Controversy, Kimberly Clark Paper Co., Neenah, Wis.	.....	.....	Pending.
Controversy, New York Central Lines, South Bend, Ind.	1	.....	Adjusted.
Controversy, waiters in Washington hotels and cafes, Washington, D. C.	423	.....	All adjusted, except that of the Raleigh Hotel.
Strike, trainmen and shopmen, East Broad Top Railroad, Orbisona, Pa.	250	1,000	Adjusted.
Strike, shoe factories, Chicago, Ill.	2,000	1,000	Pending.
Threatened strike, printers, Louisville, Ky.	70	1,500	Adjusted.
Controversy, Park Drop Forge Co., Cleveland, Ohio.	1	400	Company declined mediation on grounds that dismissal was for just cause.
Controversy, Jackson Iron & Steel Co., Jackson, Ohio.	1	350	Adjusted.
Strike, electrical workers, building trades, Atlanta, Ga.	150	.....	Pending.
Walkout, General Equipment Co., Paterson, N. J.	30	17	Adjusted.
Threatened strike, Northwest Engineering Works, Green Bay, Wis.	59	600	Pending.
Strike, Power Specialty Co., Dansville, N. Y.	300	.....	Do.
Threatened strike, Pacific Electric Railway Co., Los Angeles, Cal.	1,350	2,500	Do.
Strike, Brunswick-Balke Co., Dubuque, Iowa.	37	900	Do.
Controversy, Rath Packing Co., Waterloo, Iowa.	.....	.....	Adjusted.
Strike, metal polishers, Garford Manufacturing Co., Flyria, Ohio.	14	.....	Pending.
Controversy, S. F. Bowser Co., Ft. Wayne, Ind.	50	1,000	Adjusted.
Strike, tobacco workers, San Juan, Porto Rico.	15,000	.....	Pending.
Controversy, Standard Car Tank Co., Sharon, Pa.	.....	.....	Adjusted.
Strike, cigar makers, 26 shops, Fort Wayne and vicinity, Ind.	80	30	Do.
Lockout, machinists, specialists, helpers, Collis Plant, Clinton, Iowa.	200	.....	Unable to adjust.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE  
DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION,  
MAR. 16 TO APR. 15, 1919—Continued.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, garment workers, Sherman & Sons, Louisville, Ky.	250	.....	Unable to adjust.
Controversy, Kuhlman Car Co., Cleveland, Ohio.	75	475	Adjusted.
Threatened strike, boilermakers and car workers, Standard Car Construction Co., Masury, Ohio.	478	.....	Do.
Strike, Imperial Valley Irrigation District, Andrade, Calif.	142	58	Pending.
Controversy, Acme Packing Co., Chicago, Ill.	125	.....	Do.
Strike, boot and shoe workers, M. & S. Shoe Co., Baltimore, Md.	40	80	Company officials decline mediation. They deny discrimination and claim men were discharged for inefficiency.
Strike, bicycle tire workers, Ajax Rubber Co., Racine, Wis.	46	250	Adjusted.
Threatened strike, Stecher Lithographic Co., Rochester, N. Y.	10	500	Do.
Threatened strike, building trades, Lorain, Elyria, Oberlin, Mahurst, La Grange, Grafton, & Vermillion, Ohio.	700	800	Do.
Controversy, boiler makers, Oil City Boiler Works, Oil City, Pa.	57	100	Do.
Controversy, employees, D. T. & C. Railroad, Mendon, Ohio.	.....	.....	Pending.
Controversy, tobacco workers, Winston-Salem, N. C.	2,000	8,000	Adjusted.
Strike, Racine Auto Tire Co., Racine, Wis.	40	84	Pending.
Controversy, Lucas Iron Works, Peoria, Ill.	.....	.....	Unable to adjust.
Controversy, boiler makers, machinists, Oakland, Calif.	1,000	10,000	All differences have been adjusted with but one exception. Union claims that 150 of their men who are blacklisted by the employers are not permitted to resume their old positions.
Controversy, Haskell & Barker Plant, Michigan City, Ind.	60	360	Adjusted.
Controversy, laborers on construction of roundhouse for New York Central, Syracuse, N. Y.	.....	.....	Pending.
Strike, machinists, Standard Steel Car Co., Hammond, Ind.	600	2,100	Adjusted.
Threatened strike, building trades, Atlanta, Ga.	3,500	2,500	Do.
Controversy, Home Packing Co., Terre Haute, Ind.	3	97	Can do nothing, as company is laying off men on account of lack of work.
Strike, Illinois Car Co., Hammond, Ind.	300	200	Adjusted.
Threatened strike, Independent Pneumatic Tool Co., Aurora, Ill.	350	500	Do.
Controversy, boiler makers, Williams Bros., St. Paul, Minn.	.....	.....	Pending.
Strike, building trades and building construction of all kinds, Rochester, N. Y.	350	1,000	Do.
Strike, American Car & Foundry Co., Terre Haute, Ind.	450	500	Do.
Controversy, fire fighters, Cincinnati, Ohio.	540	.....	Unable to adjust.
Controversy, United States Zinc Co., Sand Springs, Okla.	.....	.....	Pending.
Controversy, sheet-metal workers, Baltimore, Md.	157	.....	Do.
Controversy, boiler makers and helpers, Standard Oil Co., Louisville, Ky.	7	23	Adjusted.
Strike, all industrial plants where organized labor is employed, Seattle and Tacoma, Wash.	60,000	.....	Strike called off voluntarily by Central Labor Council.
Strike, pipe fitters and helpers, Midvale Steel & Ordnance Co., Coatesville, Pa.	60	2,500	Adjusted.
Strike, East St. Louis Bridge & Construction Co., East St. Louis, Ill.	.....	.....	Pending.
Threatened strike, New York Belting & Packing Co., Passaic, N. J.	1,200	1,500	Adjusted.
Strike, Standard Bleaching Co., Passaic, N. J.	500	350	Men back to work; company conceded nothing; organization only a few months old.
Strike, boilermakers and helpers, McDermott Bros., Allentown, Pa.	2	.....	Men involved have obtained work elsewhere; company short of orders.

STATEMENT SHOWING THE NUMBER OF LABOR DISPUTES HANDLED BY THE DEPARTMENT OF LABOR THROUGH ITS COMMISSIONERS OF CONCILIATION, MAR. 16 TO APR. 15, 1919—Concluded.

Name.	Workmen affected.		Result.
	Directly.	Indirectly.	
Strike, cranemen and electrical workers, Wheeling Molding & Foundry Co., Wheeling, W. Va.	87	900	Pending.
Strike, journeymen union painters, Memphis, Tenn.			Do.
Lockout, machinists, Barber-Green Co., Aurora, Ill.	56	4	Unable to adjust.
Lockout, Allsteelquip Co., Aurora, Ill.	20		Adjusted.
Controversy, furniture manufacturing industry, Rockford, Ill.			Pending.
Controversy, Interstate Packing Co., Winona, Minn.	90		Do.
Strike, Skandia Pacific Oil Engine Co., Oakland, Calif.			Do.
Threatened strike, Amalgamated Meat Cutters and Butcher Workmen, Parker Webb & Co., Hammond Standish & Co., Sullivan Packing Co., Detroit, Mich.	1,300	200	Do.
Lockout, wire workers, Clinton, Iowa.			Do.
Controversy, George A. Hormel Packing Co., Austin, Minn.	667		Do.
Strike, Wharton Steel Co., Wharton, N. J.	300	600	Do.
Controversy, leather workers, New Castle Leather Co., Wilmington, Del.			Do.
Controversy, painters, housing project, Moline and Rock Island, Ill.			Adjusted.
Controversy, operators, power house, Muscle Shoals, Ala.			Pending.
Lockout, Consolidated Water Power & Paper Co., Grand Rapids, Wis.	150		Adjusted.
Controversy, Liberty Ship Co., Wilmington, N. C.	56	650	Do.
Strike, gas-house employees, Racine, Wis.			Pending.
Strike, sheet-metal workers, Symonds-Sabo Sheet Metal Fire Door Co., East St. Louis, Ill.	5	15	Adjusted.
Controversy, Page Co. (steel mill), Monesson, Pa.		700	Pending.
Strike, Bethlehem Steel Co. and Lebanon Iron & Steel Co., Lebanon, Pa.	1,000	3,000	Do.
Strike, affecting building trades, Wheeling, W. Va.			Do.
Strike, electrical workers, housing project, Philadelphia Navy Yard, Philadelphia, Pa.			Do.
Controversy, Aluminum Goods Co., Two Rivers, Wis.			Do.
Controversy, textile employees, Mooresville Cotton Mills, Mooresville, N. C.	300	500	Adjusted.
Strike, American Steel Wire Co., De Kalb, Ill.			Pending.
Strike, journeymen tailors, Los Angeles, Calif.: Mullen & Bluett, Desmond Co., Silverwood & Co., Nebraska Clothing Co., Bush Co., Harris & Frank, Hub Clothing Co., Scott Bros., Wood Bros.	64	200	Do.
Controversy, carpenters v. coal company and breaker company contractors, Wilkes-Barre, Pa.			Do.
Strike, ironworkers' union, East St. Louis Bridge Plant, East St. Louis, Ill.	15	60	Adjusted.
Strike, American Fabrics Co., Clinton, Iowa.	60		Do.
Strike, machinists and helpers, Pennsylvania R. R., Terre Haute, Ind.	50	100	Got men together and persuaded them to submit case to Railroad Wage Adjustment Board.
Controversy, construction work by Phoenix Bridge Co. for Central R. R. of New Jersey, Easton, Pa.			Pending.
Controversy, building trades, Lorain Power Plant, Lorain, Ohio.			Do.
Controversy, linemen, Mahoning & Shenango Railway & Light Co., Youngstown, Ohio.			Do.
Controversy, St. Joseph Lead Co., Herculaneum, Mo.			Do.
Controversy, Master Painters Association v. District Council Brotherhood of Painters, Paper Hangers and Decorators, Los Angeles, Calif.			Do.
Controversy, building trades, Topeka, Kans.			Do.



The following cases, noted as pending in the April statement, have been adjusted:

Threatened strike, building trades, New York.

Controversy, textile situation, Passaic, N. J.

Strike, blacksmiths, Cooper Iron Works, Jacksonville, Fla.

Strike, garment and auto-tire workers, Chicago Rubber Clothing Co., Racine, Wis.

Threatened strike, independent packing houses, St. Louis, Mo.

Threatened strike, oil field, gas well, and refinery workers, Coalinga, Calif.

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#### PROVISION FOR CONCILIATION AND ARBITRATION IN THE STATE OF VERA CRUZ, MEXICO.<sup>1</sup>

For the settling of all disputes and differences that arise between employers and employees in the State of Vera Cruz, a State law passed in 1918 creates (a) municipal conciliation boards and (b) a State central conciliation and arbitration board.

The duties of these boards are stated thus: "To consider and resolve disputes between workers and employers regarding the labor contract, hours, wages, responsibility for industrial accidents and diseases, strikes, and any other matters connected with this law."

##### MUNICIPAL CONCILIATION BOARDS.

In each municipality a conciliation board, subordinate to the State board, shall be established for each industrial dispute that does not affect interests outside that municipality. Its powers are limited to investigation and conciliation. A board consists of five members, two representatives designated by employers and two by workers, and the municipal counselor-at-law who acts as president.

Upon application of an employer or employee involved in a dispute, the president of the municipality forms and installs a board. The proceedings consist of two meetings for investigation, and one for conciliation, in which both sides present their cases. After the third meeting, at which the dispute must be either settled or passed along to the State board, the municipal board is dissolved. When an agreement is reached, the same must be recorded in writing, and signed by the parties thereto and the members of the board.

##### STATE CENTRAL CONCILIATION AND ARBITRATION BOARD.

The State Central Conciliation and Arbitration Board, which sits in the State capital, consists of seven members, three representatives elected by employers' organizations and three by workers', and the governor of the State or his representative as president. The president is changed as desired by the executive power; the six representatives hold office one year, are eligible to reelection, and receive emoluments fixed by the bodies they represent.

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<sup>1</sup> Boletín de Industria, Comercio y Trabajo, No. 3, pp. 91-95. Mexico, September, 1918.

The State board conciliates every dispute that affects interests in more than one municipality, and arbitrates all disputes in which conciliation has failed. It has jurisdiction over all conciliation boards and special minimum wages commissions.

Upon the failure of conciliation attempted either by itself or by a municipal board, or the refusal to accept a minimum scale fixed by a wage commission, the State board takes up the matter as an appeal and notifies the disputants of its intention to arbitrate. Eight days are then allowed for the arguing of the case, and the following eight days for the finding and publication of the award. Each award, together with all discussions and reasons relative thereto, must be issued in writing.

In case of a strike, the jurisdiction and procedure of municipal conciliation boards and the State central board are the same as before described.

## IMMIGRATION.

### IMMIGRATION IN FEBRUARY, 1919.

The following tables, prepared by the Bureau of Immigration of the Department of Labor, show the total number of immigrant aliens admitted into the United States in each month from January, 1913, to February, 1919, and the numbers admitted in each fiscal year, 1915 to 1918, and in February, 1919, by nationality. The total departures of emigrant aliens in February, 1919, numbered 11,010.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS,  
JANUARY, 1913, TO FEBRUARY, 1919.

Month.	1913	1914	1915	1916	1917	1918	1919	
							Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	6,356	9,852	18.3
February.....	59,156	46,873	13,873	24,710	19,238	7,388	10,586	7.5
March.....	96,958	92,621	19,263	27,586	15,512	6,510		
April.....	136,371	119,885	24,532	30,560	20,523	9,541		
May.....	137,262	107,796	26,069	31,021	10,487	15,217		
June.....	176,261	71,728	22,598	30,764	11,095	14,247		
July.....	138,244	60,377	21,504	25,035	9,367	7,780		
August.....	126,180	37,706	21,949	29,975	10,047	7,862		
September.....	136,247	29,143	24,513	36,398	9,228	9,997		
October.....	134,440	30,416	25,450	37,056	9,284	11,771		
November.....	104,671	26,298	24,545	34,437	6,446	8,499		
December.....	95,387	20,944	18,901	30,902	6,987	10,748		

<sup>1</sup> Decrease.

Classified by nationality, the number of immigrant aliens admitted into the United States during specified periods and in February, 1919, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN FEBRUARY, 1919, BY NATIONALITY.<sup>1</sup>

Nationality.	Year ending June 30—				February, 1919.
	1915	1916	1917	1918	
African (black).....	5,660	4,576	7,971	5,706	273
Armenian.....	932	964	1,221	221	16
Bohemian and Moravian.....	1,651	642	327	74	6
Bulgarian, Serbian, Montenegrin.....	3,506	3,146	1,134	150	17
Chinese.....	2,469	2,239	1,843	1,576	91
Croatian and Slovenian.....	1,912	791	305	33	.....
Cuban.....	3,402	3,442	3,428	1,179	25
Dalmatian, Bosnian, Herzegovinian.....	305	114	94	15	.....
Dutch and Flemish.....	6,675	6,443	5,393	2,200	158
East Indian.....	82	80	69	61	2
English.....	38,662	36,168	32,246	12,980	2,192
Finnish.....	3,472	5,649	5,900	1,867	120
French.....	12,636	19,518	24,405	6,840	859
German.....	20,729	11,555	9,682	1,992	97
Greek.....	15,187	26,792	25,919	2,002	64
Hebrew.....	26,497	15,108	17,342	3,672	264
Irish.....	23,503	20,636	17,462	4,657	629
Italian (north).....	10,660	4,905	3,796	1,074	93
Italian (south).....	46,557	33,909	35,154	5,234	153
Japanese.....	8,609	8,711	8,925	10,168	253
Korean.....	146	154	194	149	7
Lithuanian.....	2,638	599	479	135	11
Magyar.....	3,604	981	434	32	1
Mexican.....	10,993	17,198	16,438	17,602	3,029
Pacific Islander.....	6	5	10	17	.....
Polish.....	9,065	4,502	3,109	668	59
Portuguese.....	4,376	12,208	10,194	2,319	134
Roumanian.....	1,200	953	522	155	8
Russian.....	4,459	4,858	3,711	1,513	129
Ruthenian (Russniak).....	2,933	1,365	1,211	49	4
Scandinavian.....	24,263	19,172	19,596	8,741	637
Scotch.....	14,310	13,515	13,350	5,204	750
Slovak.....	2,069	577	244	35	14
Spanish.....	5,705	9,259	15,019	7,909	229
Spanish-American.....	1,667	1,881	2,587	2,231	131
Syrian.....	1,767	676	976	210	24
Turkish.....	273	216	454	24	1
Welsh.....	1,390	983	793	278	38
West Indian (except Cuban).....	823	948	1,369	732	44
Other peoples.....	1,877	3,388	2,097	314	24
Total.....	326,700	298,826	295,403	110,618	10,586

<sup>1</sup>The total number of departures of emigrant aliens in February was 11,010.



## PUBLICATIONS RELATING TO LABOR.

### OFFICIAL—UNITED STATES.

CALIFORNIA.—*Bureau of Labor Statistics. Eighteenth biennial report, 1917-18. Sacramento, 1918. 470 pp. Chart.*

Contains a statement of the operations of public and private employment offices for the fiscal years 1916-17 and 1917-18; statistical data as to union scales of wages and hours of labor on January 1, 1918; classified weekly wages paid during 1917 in 2,379 industrial establishments employing 131,118 male and 37,805 female wage earners; and a special report on the Alaska salmon canning industry for the season of 1918.

The report on classified weekly wages received by workers in 1917 shows that 10.6 per cent of the males 18 years of age and over received under \$15 per week as against 35.5 per cent in this group in 1916; and 25.5 per cent of the females 18 years of age and over received under \$9 per week as compared with 43.7 per cent in the \$9 and under group in 1916. Nearly 22 per cent of all workers received over \$25 per week.

During the period of the report 20,176 complaints were filed with the bureau, 16,832 (83.4 per cent) of which were on account of nonpayment of wages. The wages collected in 8,668 of these wage claims amounted to \$271,502.89 for the two years, or an average of \$31.32 per claim. The following table shows the number of complaints investigated by the bureau during the two years, and the grounds on which complaint was made:

COMPLAINTS INVESTIGATED AND PROSECUTIONS CONDUCTED BY THE BUREAU  
DURING THE FISCAL YEARS 1916-17 AND 1917-18.

Nature of complaint.	1916-17		1917-18	
	Complaints filed.	Prosecutions.	Complaints filed.	Prosecutions.
Blowers.....	7	.....	4	.....
Child labor.....	130	9	211	13
Eight-hour law—public work.....	15	.....	2	.....
Eight-hour law—underground work.....	7	.....	2	.....
Eight-hour law—women.....	569	27	581	15
Employment agencies—license.....	37	5	23	2
Employment agencies—misrepresentation.....	463	2	525	.....
Medical cabinet law.....	26	.....	1	.....
Nonpayment of wages.....	8,774	42	8,058	13
Sanitation.....	39	.....	163	.....
Scaffolding, flooring, etc.....	14	.....	4	.....
Seats for females.....	5	.....	1	.....
Semimonthly pay day.....	43	.....	39	.....
Ten-hour law for drug clerks.....	10	.....	12	.....
Weekly day of rest.....	9	.....	6	.....
Pay check law.....	.....	8	.....	.....
Obtaining labor by false pretenses.....	.....	2	.....	.....
Miscellaneous.....	237	.....	159	.....
Total.....	10,385	95	9,791	43

— *Industrial accident commission. Reported decisions, Vol. V, Bulletin No. 7, Sacramento, 1919. Pp. 193-224.*

CONNECTICUT.—*Board of Compensation Commissioners. Fourth Report, 1917-18. Public Document No. 58. Hartford, 1918.*

This report is noted more fully on pages 258 and 259 of this issue of the MONTHLY LABOR REVIEW.

— *Department of Labor and Factory Inspection. Bureau of Labor Statistics. Labor Laws, Revision of 1918. Hartford [1918]. 91 pp.*

Gives the text and the number of the sections in the General Statutes of Connecticut, Revision of 1918, which pertain to labor.

ILLINOIS.—*Department of Labor. General information and laws effective July 1, 1917. Springfield, 1918. 138 pp.*

Contains only those laws which bear directly upon the administration of the department of labor as it is now constituted. All other labor laws are issued by the departments which administer them.

— *Department of Public Health. First annual report, July 1, 1917, to June 30, 1918. Springfield, 1919. 76 pp.*

Report of the first year's work of this State department of public health, which, under the provisions of the Civil Administrative Code creating it, inherited the powers, authority, and duties of the former State board of health as far as they applied to health and sanitation, and besides has had added new powers and duties. To carry out these duties the department was organized with ten divisions, an eleventh having since been added, each under a chief selected through civil service on account of special experience and training. These include divisions of tuberculosis, sanitation, vital statistics, child hygiene and public health nursing, surveys and rural hygiene, hotel and lodging house inspection, public health instruction, and social hygiene.

— *Industrial survey. Report. Hours and health of women workers. Springfield, December, 1918. 120 pp.*

A digest of this report appears on pages 204 to 209 of this issue of the REVIEW.

INDIANA.—*Industrial board. Report for the year ending September 30, 1918. Indianapolis, 1919. 64 pp.*

MASSACHUSETTS.—*Board of Education. State-aided vocational education in Massachusetts. Boston, 1918. 89 pp. Bulletin, 1918, No. 4. Whole No. 95.*

This bulletin, which is a reprint from the eighty-first report of the Massachusetts Board of Education, is divided into two parts. The first part considers the Smith-Hughes act—"what it is, the board created by it, the funds it provides, the conditions it imposes, and our plans regarding it;" and the second part gives statistics regarding State-aided vocational schools, 1916-17. In connection with the plans for complying with the provisions of the Smith-Hughes Act it is proposed to use the appropriations allotted to Massachusetts in the promotion of all kinds of vocational education authorized as State-aided or State-conducted vocational education. This will include all the education offered in schools or classes under public control, classified as follows: Agricultural education, industrial education, household arts education, practical arts education, part-time education, continuation education, and vocational normal education.

— *Bureau of Statistics. The decennial census, 1915. Part II. Composition and characteristics of the population. Boston, 1918. 285 pp.*

— — *Thirty-second annual report on the statistics of manufactures, 1917. Boston, 1919. 129 pp. Public document No. 36.*

The report covers 9,865 establishments for 1917, an increase of 36 over 1916. The average number of wage earners employed is given as 708,421, an increase of 25,800 over 1916. Of this number 212,590, or about 30 per cent, were women. Compared with 1913, the greatest increases in employment in 1917, aside from those in the purely war industry classified as military and naval equipment (textile), were in the manufacture of foundry and machine-shop products, where the increase was 71.3

per cent, and of rubber goods, with an increase of 73.6 per cent. The maximum employment was reached in December, when the average was 728,171. The following table shows the number of wage earners in 1913 and in 1917 and the percentage of adult males, adult females, and young persons under 18 years of age who received under \$15 and \$15 and over per week. The proportion receiving \$15 and over in 1917 was twice as great as that in 1913 for adult males, and five times as great for adult females, indicating that there was a very general upward trend of wages in 1917.

PER CENT OF WAGE EARNERS IN EACH SPECIFIED WEEKLY WAGE GROUP, 1917  
AS COMPARED WITH 1913.

Item.	1913			1917		
	Number.	Under \$15.	\$15 and over.	Number.	Under \$15.	\$15 and over.
Adult males.....	446,530	64.9	35.1	530,890	29.9	70.1
Adult females.....	189,743	96.0	4.0	212,464	79.7	20.3
Young persons under 18 years.....	57,298	99.8	.2	60,603	97.5	2.5

MASSACHUSETTS.—*Bureau of Statistics. Labor division. Forty-fourth quarterly report on employment in Massachusetts, quarter ending December 31, 1918. Boston [1919]. 16 pp.*

—*Minimum wage commission. Supplementary report on the wages of women in candy factories in Massachusetts. Boston, January, 1919. 42 pp. Bulletin No. 18.*

This report is noted on pages 201 to 204 of this issue of the REVIEW.

MICHIGAN.—*Reconstruction committee. Report. Reconstruction in Michigan. Lansing, March 11, 1919. 26 pp.*

This report is summarized on pages 102 to 104 of this issue of the MONTHLY LABOR REVIEW.

MISSOURI.—*Children's code commission. Report. Jefferson City, 1918. 231 pp.*

This commission was appointed by the governor to revise and codify the laws relating to children, for submission to the fiftieth general assembly in 1919. In nine chapters the commission discusses the general and specific State laws for the protection of children, one chapter being devoted to laws relating to the employment of children. A number of recommendations are suggested for amending the child labor law, as follows:

1. Prohibiting the employment of children under 14 years in any occupation in the State, except that children may work in agriculture when school is not in session.
2. Raising the age limits for boys in street trades to 12 and for girls to 18 and requiring licenses and badges.
3. Prohibiting the employment of children under 12 years in night messenger service.
4. Prohibiting the employment of girls under 18 years in messenger service.
5. Prohibiting the employment of children under 16 years in mines, underground work, on power machinery, and prohibiting their employment on the stage unless a special permit has been obtained from the factory inspector.
6. Requiring physical examination and completion of the eighth grade in school for the issuance of employment certificates for children between 14 and 16 years.
7. Issuing a certificate of age proof to children between 16 and 18 years to be filed with the employer.

NEW HAMPSHIRE.—*Bureau of Labor. Twelfth biennial report for the fiscal period ending August 31, 1918. Concord, N. H., 1918. 110 pp.*

Contains reports on factory inspection, industrial accidents, strikes and lockouts, and free employment. A directory of labor organizations in New Hampshire and a financial statement of the Bureau of Labor for the two fiscal years ending August 31, 1917, and August 31, 1918, conclude the volume.

NEW YORK (CITY).—*Survey Committee. The industrial education survey of the city of New York. Report of Committee authorized by the Board of Estimate and Apportionment. 5 vols. 104, 65, 79, 60, 225 pp., respectively. New York City, 1918.*

These five volumes, dealing respectively with The printing trade—The composing room and the pressroom; Inside electrical work; Carpentry and joinery; The machinist trade; and Industrial classes in the public schools, constitute the complete report of the committee appointed by the mayor to make a survey of industrial education in the city of New York. This survey is the outcome of a demand made by organized labor in New York City, expressed in the form of a "Declaration of principles and policies of organized labor of the city of New York" at a conference held April 20, 1915, and officially ratified by a number of labor organizations. This statement demanded the extension of vocational training in the public schools of the city and insisted that such training be based upon and continually modified with reference to the industrial character of the community; that the data upon which vocational training is organized must be gathered in the workshops of the city by a systematic and continuous survey which shall embrace the whole range of industrial activity. The statement said, "The school authorities must provide that sort of industrial training that employers and wage earners jointly demand." As a result of these demands made by organized labor the Board of Education requested the Board of Estimate and Apportionment to appropriate \$15,000 for the purpose of cooperating with the United States Department of Labor in making an industrial survey for the better guidance of the board of education in its extension of industrial education. It was decided to confine the industrial studies to the four trades of printing, machine work, inside electrical work, and carpentry and joinery, and on the school side to investigate only the four-day vocational schools maintained by the city and the evening, part-time, and cooperative industrial classes then in operation. Each of these studies gives a complete result of the conditions of the specific industry as found by the committee, also resolutions and recommendations of the committee. The fifth volume, devoted to industrial classes in the public schools, deals with the administration of industrial education in New York City; licensing and employment of teachers; day vocational schools; evening trade schools; cooperative classes in New York City high schools; part-time industrial classes; and recommendations of the committee and advisory committees.

NORTH CAROLINA.—*Department of Labor and Printing. Thirty-first report, 1917-18. Raleigh, 1918. 352 pp.*

Information bearing on farms and farm labor, the trades, cotton, woolen, and silk mills, knitting mills, furniture factories, miscellaneous factories, newspapers, and railroads and employees is presented. The commissioner recommends that the age at which children should be permitted to work in industrial plants or workshops should be raised to 14 years for day service and that adequate machinery be provided for effective law enforcement. He also urges the enactment of safety requirements for machinery, boilers, etc., sanitary laws, and statutes looking to the prevention of fires and accidents. Tables are given showing the highest and the lowest daily wages paid males and females in each mill or factory reporting, no distinction being made, however, as to the occupations in which these wages were paid. The ranges of wages (excluding several amounts evidently representing sums paid to technical or professional employees) shown for all factories and mills reporting are as follows: Cotton mills, men, 75 cents to \$8, women, 60 cents to \$7; woolen mills, men, \$1 to \$6.75,



women, \$1 to \$3.75; silk mills, men, \$1.67 to \$4.10, women, 67 cents to \$4.10; cordage mills, men, \$2 to \$3; knitting mills, men, 75 cents to \$7.50, women, 50 cents to \$5.92; furniture factories, men, 60 cents to \$7, women, 75 cents to \$5; miscellaneous factories, men, 25 cents to \$10, women, 42 cents to \$7. On farms the wages for men ranged from 65 cents to \$3.38; for women from 38 cents to \$1.75; and for children, from 25 cents to \$1. In the trades the average wages paid ranged from \$2.90 to \$6.50. The prevailing number of hours of labor in each industry reporting was 10 per day.

The following table shows the number of employees in the industries reporting:

NUMBER OF EMPLOYEES IN THE VARIOUS INDUSTRIES OF NORTH CAROLINA, SHOWING PERCENTAGE OF WOMEN AND CHILDREN EMPLOYED.

Industry.	Number reporting.	Total employees.	Women and children.	
			Number.	Per cent.
Cotton mills.....	331	68,292	32,816	48.1
Woolen mills.....	5	529	204	38.6
Silk mills.....	2	1,010	693	68.6
Cordage mills.....	2	44		
Knitting mills.....	131	15,832	10,618	67.1
Furniture factories.....	89	6,933	928	13.4
Miscellaneous factories.....	1,568	54,346	11,855	21.8

<sup>1</sup> Reported by 119 mills.

<sup>2</sup> Number of women, 9,323, reported by 119 mills; number of children, 1,295, reported by 54 mills.

<sup>3</sup> Reported by 82 factories.

<sup>4</sup> Number of women, 603, reported by 41 factories; number of children, 325, reported by 26 factories.

<sup>5</sup> Reported by 1,457 factories.

<sup>6</sup> Number of women, 9,769, reported by 329 factories; number of children, 2,086, reported by 110 factories.

OHIO.—*Health and Old Age Insurance Commission. Report, recommendations, dissenting opinions. Columbus, February, 1919. 448 pp.*

The summary of findings and the recommendations of this commission were published in full in the MONTHLY LABOR REVIEW for March, 1919 (pp. 264-282). A more detailed digest of the report itself will appear in a future issue of the REVIEW.

OKLAHOMA.—*Industrial Commission. Biennial report. September 1, 1916, to August 31, 1918. Oklahoma City, 1918. 18 pp.*

This report is noted on pages 259 and 260 of this issue of the REVIEW.

PENNSYLVANIA.—*Commission on old-age pensions. Report. Harrisburg, March, 1919. 293 pp.*

A digest of this report will be published in a future issue of the MONTHLY LABOR REVIEW.

— *Council of National Defense. Woman's Committee. Department of Women in Industry. Pennsylvania women in war work. 1919. 47 pp.*

Gives a brief account of the steps taken by the Woman's Committee, first, to enroll women for war work and, second, to secure for them proper conditions and the protective standards contained in General Orders No. 13 of the Ordnance Department. The committee was warmly interested in the policy of installing woman employment managers in plants with a large force of woman workers and secured their engagement in a number of instances. The report contains a discussion of various features of the employment of women in work formerly done mainly by men. Their adaptability to new work was limited only by their physical strength. In machine plants good results were found to come from rest periods of 10 or 15 minutes in the middle of the morning and the afternoon. The policy of the employers in regard to paying women equal wages with men varied widely; a majority reported that they paid equal piece rates, and it was on piece rates that women made their highest earnings. The labor turnover was largest among the unskilled, decreasing according to the amount of pre-

liminary training women had had. "Indications point to the fact that where the work was adapted to the women's strength and skill there was a very low percentage of turnover of woman labor, it ranging from 2 to 5 per cent." A list is given of different paid occupations in which women were employed in Pennsylvania during the war period.

PENNSYLVANIA.—*Department of Labor and Industry. Third annual report, 1915. Part I: Statistics of production, wages, and employees. Harrisburg, 1918. 620 pp.*

— *Insurance Commission. Forty-fifth annual report. Part II. Workmen's compensation insurance. Harrisburg, 1918. xxviii pp.*

This report is noted more fully on pages 260 to 263 of this issue of the REVIEW.

— *Workmen's Compensation Board. Three years' administration of the workmen's compensation act in Pennsylvania. Philadelphia [1919]. 16 pp.*

This pamphlet, by the secretary of the workmen's compensation board of Pennsylvania, gives the number of accidents reported to the State for three years to be 255,616 in 1916, 227,880 in 1917, and 184,844 in 1918. The total number of agreements between employers and employees approved by the board was 54,500 in 1916, 75,076 in 1917, and 65,574 in 1918.

PHILIPPINE ISLANDS.—*Department of Public Instruction. Bureau of Education. Eighteenth annual report, 1917. Manila, 1918. 165 pp. Illustrated.*

Contains sections on industrial instruction, agricultural education, physical education, the public school and the community, and the schools and the conservation of human life.

TENNESSEE.—*Department of Workshop and Factory Inspection. Sixth annual report, 1918. Nashville [1919]. 157 pp. Illustrated.*

During the year the department made 1,608 inspections of 1,546 establishments employing 139,588 workers, of whom 21.4 per cent were females.

From January 1, 1918, to December 31, 1918, 1,662 accidents (44 fatal) were reported, resulting in a time loss of 13,851 days. Falling objects, falls of persons, and machinery were the most important sources of accidents, 284, 292, and 224 accidents being due to these respective causes.

The report presents a comparison of estimated average weekly wages received by workers in specified occupations in 1917 and 1918, as shown in the following table. The per cent of increase has been computed; it does not appear in the report.

ESTIMATED AVERAGE WEEKLY WAGES RECEIVED BY SPECIFIED CLASSES OF MALE WORKERS AND BY FEMALES IN SPECIFIED OCCUPATIONS IN TENNESSEE, IN 1917 AND 1918.

Class of worker and occupation.	Average weekly wages in—		Per cent of increase.
	1917	1918	
MALE.			
Construction work:			
Skilled mechanics.....	\$25.00	\$45.00	80.0
Semiskilled laborers.....	18.00	28.00	55.6
Common laborers.....	9.00	18.00	100.0
Factory operatives:			
Skilled mechanics.....	22.50	38.00	68.9
Semiskilled.....	18.00	26.50	47.2
Common laborers.....	9.00	18.00	100.0
FEMALE.			
Clerical work.....	15.00	22.00	46.7
Machine operatives, beginners.....	6.00	9.00	50.0
Machine operatives, experienced.....	12.00	18.00	50.0
Hand workers.....	8.00	15.00	87.5

WASHINGTON.—*Industrial insurance and medical aid departments. Seventh annual report for the 12 months ending September 30, 1918. The workmen's compensation act. Olympia, 1919. 88, 46 pp.*

Besides workmen's compensation experience data, this report contains the proceedings of a conference held by the industrial commission at Seattle, September 4, 1918, relating to standards of accident prevention and merit rating.

WISCONSIN.—*Compensation insurance board. Insurance experience under compensation act. January 3, 1919. 18 pp.*

This report is noted on pages 263 and 264 of this issue of the REVIEW.

— *Industrial Commission. Report on allied functions for the fiscal year ending June 30, 1918. [Madison, 1919.] 71 pp.*

Gives a brief review of the activities of the safety and sanitation department, the workmen's compensation department, the employment department, the woman and child labor department, the apprenticeship department, the statistical department, and of miscellaneous duties performed by the commission. The commission issued a total of 15,654 orders relating to safety and sanitation, 9,240, or 59 per cent, pertaining to transmission apparatus. The report suggests that the most striking feature in the administration of the workmen's compensation act has been the increase in the average benefits per case—from \$93 in 1916-17 to \$108 in 1917-18. This increase in average benefits paid, it is stated, was most pronounced in cases involving permanent disability, either partial or total, in which cases the average increased from \$445 to \$524. Two reasons are given for the increase: (1) The amendments to the act, effective September 1, 1917, and (2) the general increase in wages. The total benefits paid amounted to \$1,705,468, of which sum \$1,278,383 was paid in indemnities and \$427,085 in medical aid (including \$7,538 funeral benefits in fatal cases). The number of compensatable accidents reported was 19,361 and the cases settled totaled 15,825. Reference is made to the creation in August, 1917, of the compensation insurance board, which "altered materially the functions of the industrial commission with reference to compensation insurance." This board is charged with insuring the solvency of all companies writing compensation insurance in the State, and to this end must approve all rates of insurance companies as to their adequacy. It also has supervision of the Wisconsin compensation rating and inspection bureau, which inspects all manufacturing plants in the State to determine their insurance rating. The employment department reports 76,129 cases of help wanted, 63,360 references to positions, and 44,705 positions secured. There were 63,338 applications for work. The largest number of positions secured was in the logging industry, being 12.7 per cent of the total. The report contains the text of a number of orders relating to hours of labor for woman workers and notes the appointment of an advisory wage board to assist the commission in determining what is a living wage for woman and minor employees, which data will be considered in establishing a minimum wage.

— *Special committee on social insurance. Report. January 1, 1919. Madison, 1919. 85 pp.*

This report is digested on pages 265 to 269 of this issue of the REVIEW.

UNITED STATES.—*Congress. Senate. Committee on Commerce. Hearings on S. Res. 170. 2 vols. Washington, 1918. 1218, 1219-2515 pp.*

The resolution directs the Committee on Commerce to investigate all matters connected with the building of merchant vessels under the direction of the United States Shipping Board Emergency Fleet Corporation and report its findings to the Senate, together with its recommendations thereon.

— — — *Committee on Education and Labor. Social and industrial conditions in the United States. Hearings pursuant to S. Res. 382. Washington, 1919. 224 pp. 65th Congress, 3d session.*

S. Res. 382 directs the Committee on Education and Labor to recommend to the Senate methods of promoting better social and industrial conditions in the country. It was published in the MONTHLY LABOR REVIEW for January, 1919, p. 49.



UNITED STATES.—*Department of Agriculture. Bureau of Markets. Motor transportation for rural districts. Washington, January 29, 1919. 32 pp. Bulletin No. 770.*

This report is the result of an investigation as to the feasibility of establishing motor service in rural districts. It covers such subjects as the character of the roads, location of proposed routes, commodities to be carried each way, amount of business that would be placed, service given by other carriers, schedules that should be maintained, methods of collecting and delivering, operating costs, etc. The conclusion reached is that under proper conditions, and where a fair knowledge of the limitations and difficulties obtains, motor truck transportation promises to play an important rôle in rural districts.

— *Department of the Interior. Bureau of Education. The cooperative school, by William T. Bawden. Washington, February, 1919. 10 pp. Industrial education circular No. 2.*

A brief account of the "cooperative system of education" as it has been tried in different secondary schools of the country; an outline of the plan as proposed for the College of Technology, Newark, N. J., engineering school, for the school year beginning September, 1919; and a summary of the special advantages of the plan for secondary schools. The plan is based upon a cooperative arrangement between the educational institution and one or more industrial plants, by which theoretical instruction is given by the institution and practical instruction by the industries, the students being divided in each class into two groups, one group being in school while the other is at work in the plants for a definite period at the end of which the two groups exchange places. This "cooperative system" of education on which later efforts have been based was developed in the college of engineering, University of Cincinnati, during the year 1906-7. The pamphlet concludes with a bibliography.

— *Bureau of Mines. Accidents at metallurgical works in the United States, 1917. Washington, 1919. 23 pp. Technical paper 215.*

This report is noted on pages 244 and 245 of this issue of the REVIEW.

— *Labor saving at limestone quarries, by Oliver Bowles. Washington, 1919. 26 pp. Technical paper 203.*

— *Department of Labor. Bureau of Labor Statistics. Descriptions of occupations, prepared for the United States Employment Service. Washington, 1918-19.*

*Boots and shoes; harness and saddlery; tanning. 70 pp.*

*Cane-sugar refining; flour milling. 17 pp.*

*Coal and water gas; paint and varnish; paper; printing trades; rubber goods.*

*[1919.] 52 pp.*

*Electrical manufacturing; distribution and maintenance. 33 pp.*

*Logging camps and sawmills. 32 pp.*

*Medicinal manufacturing. 13 pp.*

*Metal working; building and general construction; railroad transportation; ship-building. 123 pp.*

*Mines and mining. 37 pp.*

*Office employees. 20 pp.*

*Slaughtering and meat packing. 43 pp.*

*Street railways. 23 pp.*

*Textiles and clothing. 94 pp.*

*Water transportation. 32 pp.*

— *Children's Bureau. The States and child labor. Washington, 1919. 46 pp. Bureau publication No. 58. Children's year leaflet No. 13.*

This bulletin, prepared in collaboration with the child conservation section of the field division, Council of National Defense, summarizes briefly the age and hour restrictions placed by the various State laws upon the employment of children under 16 years in factories and stores and the age restrictions placed upon the employment of boys in mines. These regulations are of two types, those fixing minimum ages and maximum hours and prohibiting night work, and compulsory school-attendance laws.



UNITED STATES.—*Department of Labor. Employers' Industrial Commission. Report on British labor problems. Washington, 1919. 31 pp.*

This report is noted on pages 101 and 102 of this issue of the REVIEW.

— — — *Employment Service. Manual. 34 pages, mimeographed. [Washington, 1919.]*

This manual was designed to be issued in loose-leaf form to all employees and associates of the service by the training section immediately after the first normal conference. It contains sections on Function of service; Professional spirit and standards; Functional administration—Federal, State; Community labor boards; Personnel regulations; Fiscal regulations; Special post-war activities—cancellation of contracts, demobilization, placement of handicapped; Office layout; Interviewing and placement; Recruiting; Job soliciting; Clearance; Forms and files; Reports and statistics; and Community coordination.

— — — *Training Service. Labor turnover and industrial training. Washington, 1919. 8 pp. Training bulletin No. 6.*

— — — *Industrial training and foreign trade. Washington, 1919. 12 pp. Training bulletin No. 7.*

— — — *Some advantages of industrial training. Washington, 1919. 12 pp. Training bulletin No. 8.*

— — — *Seven million candidates for training. Extract from The Industrial Arts Magazine. Washington, 1919. 15 pp. Training bulletin No. 9.*

— — — *A business man's experience with industrial training and what his firm proposes to do because of it. Washington, 1919. 12 pp. Training bulletin No. 10.*

— *Federal Board for Vocational Education. Journalism as a vocation. Washington, January, 1919. 10 pp. Opportunity monograph, Vocational rehabilitation series No. 18.*

— — *The lumber industry. Logging; sawmilling. Washington, January, 1919. 15 pp. Opportunity monograph, Vocational rehabilitation series No. 19.*

— — *Occupations in the automobile manufacturing industry. Washington, January, 1919. 31 pp. Opportunity monograph, Vocational rehabilitation series No. 20.*

— *Federal Trade Commission. Report on canned foods. Canned salmon. December, 1918. Washington, 1919. 83 pp.*

— *Fuel Administration. General orders, regulations, and rulings, including the acts of Congress, Executive orders, and proclamations of the President pursuant to which the United States Fuel Administration was created and is acting. August 10, 1917–December 31, 1918. Washington, 1919. 614 pp.*

— *Railroad Administration. Extension of tenure of Government and control of railroads. Statements of Mr. Walker D. Hines, Director General of Railroads, before the Interstate Commerce Committee of the United States Senate, February 3, 4, 5, and 6, 1919. Washington, 1919. 134 pp.*

— *Shipping Board. Marine and dock labor. Work, wages, and industrial condition relations during the war. Report of director of marine and dock industrial relations division. December 31, 1918. Washington, 1919. 203 pp.*

— — *Emergency Fleet Corporation. Industrial Relations Division. Report of an inquiry as to works committees made by British Minister of Labor. [Washington] 1919. 131 pp.*

This booklet, besides containing a reprint of the report on the constitution and working of works committees, contains in appendixes reprints of the questionnaire used in the inquiry; the report upon individual works committees, etc.; the summary of a district investigation; the report of the joint committee on absenteeism; the national and district schemes—shop stewards; the Whitley report—supplementary report on works committees; and the scheme of local joint pits committees.

This report is noted more fully on pages 209 to 212 of this issue of the MONTHLY LABOR REVIEW.

UNITED STATES.—*Tariff Commission. Costs of production in the sugar industry. Washington, 1919. 55 pp. Charts. Tariff information series No. 9.*

Discusses the changes in costs and prices which were brought about in the sugar industry by the world war. The report states that in all regions of the industry labor cost was an important element in the increases in both factory and raw material costs. This was especially true, it is stated, in Hawaii, where the "laborers are paid a standard wage, to which is added a bonus based, according to a sliding scale, on the New York quotations of the price of raw sugar. This bonus, amounting to only 4 or 5 per cent of the standard wage before the war, had risen to 78 per cent in 1916-17. In that year the system was changed, but even after the change the bonus in the following year amounted to 54 per cent of the standard wage. \* \* \* It is estimated that for every dollar per ton added to the price of sugar the cost per ton of producing sugar in Hawaii is increased 35 to 50 cents from this source." The report concludes that "considering the present trend of prices of the necessities of life, some such automatic increment to wages is equitable." Each element that enters into the cost of production is considered, including the tariff, which is fully discussed.

— *Treasury Department. Public Health Service. Sanitation of rural workmen's areas, with special reference to housing. Washington, 1918. 35 pp. Reprint No. 487 from the Public Health Reports, September 6, 1918.*

This is a report of the divisional committee on village and public sanitation, section on sanitation, committee on welfare work of the committee on labor, advisory commission, Council of National Defense. Besides dealing with the selection and preparation of new sites and the laying out and the improvement of streets, the report considers the water supply, the collection and disposal of excreta, the collection and disposal of garbage and other refuse, the housing of wage earners in labor camps, permanent houses, rat-proofing premises, control of other vermin, house cleaning and general cleanliness, and local legislation.

#### OFFICIAL—FOREIGN COUNTRIES.

ARGENTINA.—*Departamento Nacional del Trabajo. Boletín No. 39, October, 1918. Buenos Aires, 1918. 71 pp.*

This bulletin is devoted entirely to a discussion of the benefits arising from collective contracts between employer and employees, and refers to the printers' strike in the Federal district in 1906, and to the permanence of the agreement entered into at its conclusion.

— (BUENOS AIRES).—*Dirección General de Estadística y Departamento Provincial del Trabajo. Boletín No. 199. April-June, 1917. 159-291 pp.*

This report contains vital, financial, school, labor, and accident statistics for the second quarter of 1917, and a digest of laws and decrees affecting labor.

AUSTRALIA.—*Bureau of Census and Statistics, Labor and Industrial Branch. Prices, purchasing power of money, wages, trade-unions, unemployment, and general industrial conditions, 1917. Melbourne, July, 1918. 186 pp. Report, No. 8.*

This report contains information in summarized form regarding trade-unionism, unemployment, prices, rents, purchasing power of money, wages, and general industrial conditions. In addition, the several appendixes to the report furnish detailed information in comparable form as to wholesale and retail prices and rents for the year 1917, and also as to current rates of wages and hours of labor in all the more important trades and occupations in the different States of the commonwealth. It is stated that most, if not all, of the subjects dealt with in the report have not received in the past that attention in the commonwealth that they now demand and that, in view of the lack of data bearing thereon, it became necessary to commence the collection of information anew and to create a suitable organization for that purpose.

In collecting data for the report, a great variety of sources of information was utilized. Particulars as to the purchasing power of money were obtained direct from retail dealers and house agents. Wholesale prices were taken from market quotations in the daily press and in trade journals. Information as to unemployment was obtained from trade-unions, while that relating to industrial disputes and changes in rates of wages was obtained both from trade-unions and from employers' associations. A large number of returns were also received from official sources.

Sections of the report relate to the operation of the State free employment bureaus, the assistance given to immigrants, industrial accidents, import and export prices, and operations under the arbitration and wages board acts. A section is also devoted to international labor statistics.

AUSTRALIA.—*Bureau of Census and Statistics, Labor and Industrial Branch. Quarterly Summary of Australian Statistics. September, 1918. Melbourne, 1918. 72 pp. Bulletin No. 73.*

— (VICTORIA).—*Government statist. Fortieth annual report on Friendly Societies \* \* \* for the year 1917. Melbourne [1918]. xiv, 34 pp.*

Reports a total of 46 societies with 1,516 branches, having 158,181 members and an annual income of £653,055 (\$3,178,092.16). The total funds available in 1917 was £3,017,503 (\$14,684,678.35), or £19 ls. 6d. (\$92.83) per member.

BRAZIL.—*Ministerio da Agricultura, Industria e Commercio. Historia da colonização do Brasil organizada por Joaquim da Silva Rocha, Directoria do Servico de Povoa-mento. Vol. 1, 1918. Rio de Janeiro, 1918. 314 pp.*

This is the first of a series of historical studies on colonization and immigration. The first chapter reviews the colonization projects from the Phoenician period to the present date, their purpose and results, and their influence on commerce, industry, and civilization. Other chapters are: Systems of organization; Chinese and Japanese; European emigration; Portuguese in Brazil; Historical periods in America; and several chapters on various subjects relating particularly to colonization in Brazil.

— *Ministerio da Viação e Obras Publicas. Relatorio apresentado ao presidente da republica dos Estados Unidos do Brazil. Anno de 1917. Rio de Janeiro, 1918. xxv, 508 pp.*

An annual report prepared by the minister of railways and public works, relative to the maintenance and operation of State and other railway systems, ocean and river transportation, public postal, telegraph, telephone, lighting, and water-supply services operated in whole or in part under State control.

CANADA.—*Department of Labor. Eighth annual report on wholesale prices, 1917. Ottawa, 1919. 156 pp.*

— *Department of Public Information. Canada's part in the great war. Ottawa, January, 1919. 64 pp. Charts.*

Concise and complete account with statistics, of Canada's war effort. Sections devoted to Women's work, National registration and labor, and Rehabilitation of returned soldiers are of special interest to labor.

— — *The program of repatriation. Issued for the Repatriation Committee. Ottawa [1919]. 48 pp.*

— — *Returned soldier's handbook. Contains valuable information and tells you where to get more. Issued for the Repatriation Committee. Ottawa [1919]. 30 pp.*

— *Department of Soldiers' Civil Reestablishment. Invalided Soldiers' Commission. Report. Ottawa, May, 1918. 107 pp.*

A summary of the work accomplished during the year by the commission, which superseded the Military Hospitals Commission, and which was placed under the direction and control of the Minister of Soldiers' Civil Reestablishment in February, 1918. The report gives detailed information concerning institutions, order of procedure regarding returned men, vocational training, employment, special provision for those suffering from special diseases, and other related matter.



CANADA.—*Repatriation Committee. General survey of Canada's repatriation plans. Ottawa, 1918. 58 pp. 29 charts. P. C. 2823.*

The repatriation committee, which was created by an order in council, "is charged with the duty and responsibility of securing the closest cooperation of all departments of the Government and of other agencies now existing or that may be hereafter created for the purpose of dealing with the following: (a) The absorption into civil life and occupation of discharged soldiers; and (b) Industrial labor conditions which may arise from industrial dislocation and readjustment." This survey treats, in turn, The problem of repatriation; The machinery of repatriation; Getting the boys out of khaki; Bringing home the soldiers' dependents; The war service gratuity; Helping the wounded to overcome handicaps, including the scales of pensions and allowances for deaths and disabilities; Distributing employment opportunities; Insuring employment opportunities; and Insuring better living and working conditions. Charts show the organization of various branches of repatriation work.

— — — *War to peace: The program of the Canadian Government regarding the returned soldiers and readjustment of industrial conditions. [Ottawa, 1919.] 29 pp.*

The chief features of the program are the finding of employment for returned soldiers; the provision of free medical and hospital care, orthopedic and surgical appliances, vocational training, and pensions, for the disabled soldier; and the taking over, at cost price, of land to be sold to soldiers on the amortization plan.

— *Soldier Settlement Board. Handbook, giving information regarding land settlement, agricultural training, and loans for returned soldiers. Ottawa, December 31, 1918. 20 pp.*

This will be reviewed in a future number of the MONTHLY LABOR REVIEW.

— — — *Announcement. Supplement to the second edition of the Soldier Land Settlement Handbook. Ottawa, February 14, 1919. 4 pp.*

This will be reviewed in a future number of the MONTHLY LABOR REVIEW.

— (NOVA SCOTIA).—*Department of Public Works and Mines. Annual report on mines, 1918. Halifax, 1919. 76 pp. Charts.*

During the year ending September 30, 1918, 122 fatal accidents occurred in coal mines in Nova Scotia, 88 of these having been caused by one explosion. An average of 12,823 workmen were employed in 23 coal mines for which figures are given. Attention is called to the fact that the number of employees was practically the same as in the previous year, but that there was a considerable decrease in coal-producing men, with a resultant decrease in output.

— (ONTARIO).—*Bureau of Mines. Twenty-seventh annual report, 1918. Toronto, 1918. 265 pp. Maps. Illustrated.*

During the year 1917 at the mines, metallurgical works, quarries, clay and gravel pits regulated by the mining act of Ontario there were 34 fatal accidents, causing the death of 36 men, as compared with 51 deaths in 1916. Of these, 18 accidents resulting in 19 deaths, occurred underground. Above ground 7 men were killed at the mines, 6 at metallurgical works, and 4 at the quarries. Seventeen companies had fatal accidents during the year.

CHILE.—*Oficina Central de Estadística. Anuario Estadístico de la República de Chile, 1916-17. Santiago de Chile, 1917 and 1918. 8 vols.*

DENMARK.—*Direktoratet for Arbejds-og Fabriktilsynets. Beretning om arbejds-og fabriktilsynets virksomhed. Aarene 1916 og 1917. Copenhagen, 1918. 49 pp.*

Report of the factory inspection service of Denmark for the years 1916 and 1917.

FRANCE.—*Ministère du Commerce, de l'Industrie, des Postes et des Télégraphes. Projet de réorganisation des services du Ministère du Commerce et de l'Industrie. Paris, 1917. 160 pp.*

This project for the reorganization of the services of the Ministries of Commerce and of Industry is worked out in detail in six parts, of which the fourth part—devoted to the development of French institutions and establishments for technical instruction—



is of special interest to labor. After considering the inadequacy of the present facilities for technical and vocational instruction in France, plans are proposed for the creation of national laboratories, and the various institutions at present existing are considered with regard to their present equipment and possible improvement. Among these are special technical institutes; the National Conservatory of Arts and Crafts; the Central School of Arts and Manufactures; the Normal School for Technical Instruction; national schools of arts and crafts; national vocational schools of Armentières, Nantes, Vierzon, and Voiron, which prepare pupils for admission to the national schools of arts and crafts and turn out overseers, shop managers, and designers; trade schools; and practical schools of commerce and industry. The report states that—

It has been rightly said that the disappearance of apprenticeship constitutes "a double peril"—a national peril from the point of view of our economic prosperity, and a social peril in that it concerns the condition and the future of wage earners. The Senate, in voting the Astiér law, which makes vocational courses obligatory upon young men and women less than 18 years of age employed in commerce and industry, has estimated that the best means of defense against this double menace consists in making vocational instruction universal. It is to this heavy task that the Ministry of Commerce and Industry ought to consecrate itself as soon as the law now submitted to the Chamber of Deputies is passed.

FRANCE.—*Ministère du Travail et de la Prévoyance Sociale. Rapport sur l'application pendant les années 1915 et 1916 de la Loi des Retraites Ouvrières et Paysannes. Paris, 1919. 222 pp.*

This report will be noted more fully in a future issue of the REVIEW.

GREAT BRITAIN.—*Board of Agriculture and Fisheries. Report on Wages and Conditions of Employment in Agriculture. Vol. 1, General Report. London, 1919. 202 pp. Price, 1s. 9d. net.*

Contains results of an investigation of wages and conditions of employment in agriculture in England and Wales, under the following sections: I. Survey of farming; II. Supply of labor and its quality; III. Conditions of labor; IV. Wages and earnings; V. Cottage accommodation and rents; VI. Relations of employers and employed. Gardens, allotments, small holdings, etc.

— *Coal Industry Commission. Interim report by Messrs. R. W. Cooper, J. T. Forgie, and Evan Williams. London, 1919. 8 pp. Cmd. 86.*

Reviewed on pages 109 to 114 of this number of the MONTHLY LABOR REVIEW.

— *Interim report by the Honorable Mr. Justice Sankey (chairman), Mr. Arthur Balfour, Sir Arthur Duckham, and Sir Thomas Royden. London, 1919. 14 pp. Cmd. 84.*

Reviewed on pages 109 to 114 of this number of the MONTHLY LABOR REVIEW.

— *Report by Messrs. R. Smillie, Frank Hodges, and Herbert Smith, Sir Leo Chiozza Money, Messrs. R. H. Tawney, and Sidney Webb. London, 1919. 20 pp. Cmd. 85.*

Reviewed on pages 109 to 114 of this number of the MONTHLY LABOR REVIEW.

— *Committee on Recruitment for the Civil Service after the War. Interim report, dated February 28, 1918; 5 pp., Cmd. 34; Second interim report, dated May 17, 1918, 5 pp., Cmd. 35; Third interim report, dated October 30, 1918, 7 pp., Cmd. 36. London, 1919. Price, 1d. net, each.*

The first report indicates the modifications in the usual physical standards for certification which were considered desirable in order to facilitate the entry to the permanent civil service, or the promotion within that service of persons whose health had been impaired through naval or military duty. The second report takes up "the steps to be taken to utilize, in suitable clerical or administrative employments, the services of officers and men discharged from the Navy and Army on account of ill health." The third deals with the method of filling permanent vacancies in class 1 and intermediate or corresponding grades pending a resumption of open competition. The examination for class 1 before the war having presupposed a complete university education, which few, if any, of the available candidates will now possess, it will

be impossible to resume competitive examinations of the prewar type for at least two or three years after demobilization.

GREAT BRITAIN.—*Imperial war conference, 1918. Extracts from minutes of proceedings and papers laid before the conference. London, 1918. 252 pp. Cd. 9177. Price, 2s. net.*

Among the subjects under consideration and upon which resolutions were unanimously agreed to by the conference, subject to an exception noted, were the control of raw materials, the nonferrous metal industry, the dye manufacturing industry, central emigration authority, the imperial mineral resources bureau, and naturalization.

— *Ministry of Pensions. First annual report, to March 31, 1918. London, 1919. 142 pp. Cmd. 14. Price, 9d. net.*

Sections deal with vocational training—training of disabled men, war widows, and disabled officers and nurses; and employment of the war disabled—men and officers.

— *Report upon openings in agriculture suitable for disabled sailors and soldiers. London, 1918. 6 pp. Price, 1d. net.*

This report, which is issued in collaboration with the Board of Agriculture, considers openings in farm work, dairying, forestry, horticulture, market gardening, fruit growing, poultry and bee keeping; also training, maintenance during training, and wages and hours of work. The question of agricultural motor-tractor work is not included, being dealt with in a separate report.

— *Ministry of Reconstruction. Advisory Council. Women's Housing Subcommittee. Final report. London, 1919. 21 pp. Cd. 9232.*

The committee was appointed early in 1918 and submitted a preliminary report in May, 1918 (MONTHLY LABOR REVIEW, December, 1918, pp. 335-337). It was the purpose of the committee to call attention to and make recommendation to secure improvements in those features of all houses which affect the woman who does the housework. The recommendations of the committee not contained in the preliminary report are for a high standard of material and workmanship, neighborhood planning as well as house planning, increased attention to ventilation and heating, cheap electricity for domestic purposes, compulsory published registration of landlords, compulsory sanitary certification by the medical officer of health to prevent crowding, improved water supply, and for limitation of number of cottages where no drainage system exists.

— *Committee on the Increase of Rent and Mortgage Interest (war restrictions) acts. Report. London, 1919. 17 pp. (Cd. 9235.)*

This committee was appointed in April, 1918, to report with reference to the working of the acts for the restriction of rent profiteering during the war and their effect upon postwar housing. The recommendations of the committee are to the effect that (1) present restrictions on increasing rents should be continued with modifications for a further period of 2½ years; (2) in particular cases the standard rent should be subject to variation by the local courts; (3) the restrictions should not apply to houses built from now on; (4) taxes should not be increased on existing houses because of certain gradual rent increases recommended by the committee.

"The final solution of the housing question, so far as the working classes are concerned, is that wages should be sufficient to enable workers to pay economic (or 'commercial') rents for suitable houses." Only in special cases should subsidizing be resorted to.

A minority report was made.

— *Reconstruction problems 13. Rural industries. London, 1919. 16 pp. Price, 2d.*

Considers: What is a rural industry? Alternative occupations for agriculturists; The problem of low wages; State aid; and related subjects.

— *Reconstruction problems 14. Food production and its problems for the consumer. London, 1919. 24 pp. Price, 2d.*

**GREAT BRITAIN.**—*National Health Insurance Commission (England). Reports of inquiries and appeals under the National Health Insurance (Medical Benefit) Regulations (England), 1913. Vol. II. London, 1919. 78 pp. Cmd. 18. Price, 4d.*

This volume comprises reports of cases dealt with since the issue of Volume I up to the end of June, 1918. The several parts of the volume correspond with those in Volume I, with the exception of Part V, which contains reports of cases referred to the commissioners for arbitration. Since the issue of Volume I no cases relating to questions of "competence and skill" of the kind reported in Part V of that volume have been referred to referees. The report includes inquiries relating to medical practitioners, inquiries relating to persons, firms, and bodies corporate supplying drugs and appliances, appeals by medical practitioners against decisions of insurance committees to deduct sums on the ground of excessive prescribing, appeals by medical practitioners against decisions of insurance committees, and cases referred to the commissioners for arbitration under clause 14 of the agreement between medical practitioners and insurance committees.

— *National Health Insurance Joint Committee. Medical Research Committee. A study of social and economic factors in the causation of rickets, by Margaret Ferguson. With an introductory historical survey by Leonard Findlay. London, 1918. 99 pp. Charts. (Special report series No. 20.) Price, 2s. net.*

The first part comprises the historical survey; the second contains chapters on Object, methods, and material; Family history; The rachitic child; The rachitic family; Income and expenditure; Housing; Bourneville and Port Sunlight—a comparison with conditions in Glasgow; Conclusions; and References; and the third part deals with the pathology and etiology of the disease. The study goes in considerable detail into the relation of the disease to living conditions, including diet, housing, and exercise.

— *National Industrial Conference. Minutes of proceedings, Feb. 27, 1919. London, 1919. 64 pp.*

A report of the National Industrial Conference called by the Prime Minister, Mr. Lloyd-George. A more complete discussion of this report appears on pages 104 to 108 of this number of the MONTHLY LABOR REVIEW.

— — *Report of provisional joint committee for presentation to further meeting of industrial conference . . . April 4, 1919. London, 1919. 14, xviii pp.*

This report is reviewed in some detail on pages 104 to 108 of this issue of the MONTHLY LABOR REVIEW. The report contains two appendixes: I—Memorandum on the causes of and remedies for labor unrest, presented by the trade-union representatives on the joint committee appointed at the National Industrial Conference, held at Central Hall, London, on February 27; and II—Provisional scheme for trade-union representation on the National Industrial Council.

— *National Relief Fund. Report of the administration of the fund up to the 30th September, 1918. (In continuation of Cd. 9111.) London, 1919. 11 pp. Cmd. 16. Price, 2d. net.*

— (SCOTLAND).—*Local Government Board. Provision of houses for the working classes. Edinburgh, 1919. 10 pp. (Housing and town planning [circular] No. 1.)*

Circular explaining plans of the board for assisting local authorities in housing.

**INDIA.**—*Department of Statistics. Statistics of British India. Vol. 3. Public health. Calcutta, 1919. 116 pp. Ninth issue. No. 787. Price, 1 rupee, or 1s. 6d.*

The note contains vital statistics and tables of mortality rates from fevers, from principal diseases, infantile mortality, and other matters.

— *Industrial Commission. Report, 1916-1918. Cmd. 51. Calcutta, 1918. 515 pp. Price, 4s. 6d. net.*

India as an industrial country—her present position and possibilities of development—is the subject of the first chapters of the report. Passing to a discussion of the



Indian in industry, the report shows that the relatively low wages of the Indian workman are counterbalanced by his comparative inefficiency. The commission attributes this inefficiency to the absence of education, the low standard of comfort, and the effects of preventable disease. The opinion is expressed that the remedy lies in raising the standard of comfort and improving the public health—ends which "can be attained only by education, improving housing, and a general policy of betterment, in which an organization for the care of public health must play an important part."

MEXICO.—*Reseña y Memorias del Primer Congreso Nacional de Industriales.* Mexico, 1918. 636 pp.

This is a report of the proceedings of the first national congress of manufacturers called by the Department of Industry, Commerce, and Labor and held in the City of Mexico, November 16 to December 15, 1917. The congress was composed of representatives of manufacturers' associations, elected by conventions called for that purpose. The proceedings were limited to discussions, debates, and study of industrial conditions: (1) The organization of industrial chambers and their confederation for mutual aid, and the establishment of bureaus in the Capital which should act as a consultative body between the branches of industry; (2) methods of promoting the development of the industrial resources of the country; and (3) consideration of industrial legislation.

SWEDEN.—*Riksförsäkringsanstalten år 1917.* Stockholm, 1918. 154 pp. (*Sveriges officiella statistik.*)

Report of the State Insurance Institute for the year 1917. The following is a summary table of the operations of the institute. In order to make the figures comparable, the preliminary figures for each year for the number of accidents reported and compensated have been used.

STATISTICS OF THE SWEDISH STATE INSURANCE INSTITUTE, 1903 TO 1917.

Item.	1903	1908	1913	1914	1917
Collective policies <sup>1</sup> .....	1,464	3,539	7,169	8,003	10,975
Workmen insured.....	32,091	70,554	127,722	135,765	195,735
Accidents reported.....	135	<sup>2</sup> 4,181	9,101	10,596	16,127
Compensated cases.....	56	3,877	8,251	9,736	14,327
Disability.....	51	3,844	8,175	9,664	14,224
Death.....	5	33	76	72	103
Compensation paid for—					
Sick benefits.....	\$686	\$29,421	\$65,441	\$77,406	\$105,515
Disability and death.....	\$1,289	\$51,047	\$87,336	\$97,881	\$128,264
Funeral benefits.....	\$80	\$531	\$1,158	\$1,222	\$1,688
Assets, Dec. 31.....	\$85,531	\$912,391	\$1,586,100	\$1,745,211	\$2,364,476
Liabilities, Dec. 31.....	\$72,621	\$865,044	\$1,501,402	\$1,651,702	\$2,155,316
Premiums.....	\$47,255	\$110,145	<sup>3</sup> \$211,492	<sup>3</sup> \$235,005	\$297,431
Cost of administration.....	\$19,834	<sup>3</sup> \$31,946	<sup>3</sup> \$50,577	<sup>3</sup> \$60,079	\$140,613

<sup>1</sup> Practically the number of all policies issued.

<sup>2</sup> Large increase due to fact that beginning in 1905 insurance could be taken out for accidents of 60 days' duration or less.

<sup>3</sup> Includes cost of administration of fishermen's insurance operative since Jan. 1, 1909.

— *Socialstyrelsen. Sjömansyrket i Sverige av K. Socialstyrelsen. Del II. Stockholm, 1919. texte, 267 pp; tabeller, 160 pp.*

This comprises Part II of a very comprehensive investigation by the labor office of Sweden into the working and living conditions of Swedish seamen. Part I, dealing with conditions on board, registration, hiring, and discharging, food, and quarters, appeared in 1914. With board, the average monthly wages of various classes of personnel on steamships, 1860 to 1917, have been as follows:



## AVERAGE MONTHLY WAGES, INCLUDING BOARD AND QUARTERS, OF SEAMEN ON SWEDISH STEAMBOATS, 1860-1917.

Year.	Chief helmsman.	Helmsman.	Shipwrights.	Boat-swain.	Seamen (first class).	Seamen (second class).	Seamen's apprentice.	Firemen (first class).	Firemen.	Cargo men.	Stewards.	Cooks.
1860.....	\$12.33	\$12.32	\$11.52	\$11.52	\$9.65	\$8.04	\$4.29	\$13.40	\$9.65	\$6.97	\$7.50	\$7.50
1870.....	14.20	14.20	13.13	12.60	10.45	8.04	5.36	14.47	10.45	8.04	10.45	8.04
1880.....	15.54	17.96	12.86	12.60	10.45	8.31	5.90	15.28	11.52	8.58	13.13	8.33
1890.....	15.54	16.88	14.74	13.13	11.52	9.11	6.43	15.81	11.79	8.31	15.23	10.72
1900.....	17.96	19.83	16.62	15.81	13.13	10.45	7.24	18.49	12.86	9.11	17.37	12.32
1910.....	19.83	21.44	18.76	17.96	14.74	12.06	7.50	19.83	14.47	10.45	21.90	14.47
1912.....	19.56	20.64	19.30	18.22	15.01	12.06	8.04	17.69	14.47	10.72	22.37	15.81
1917.....	29.21	30.02	23.85	23.32	20.10	16.62	10.99	24.39	19.83	13.40	33.56	22.13

UNION OF SOUTH AFRICA.—*Office of census and statistics. Official yearbook. No. 1, 1917. Containing statistics mainly for the period 1910 to 1916. Pretoria, 1918. 676 pp. Map.*

Contains chapters on vital statistics, public health and hospitals, education, social conditions, agriculture, and fisheries, mines, manufacturing industries, and other matters of interest to labor.

## UNOFFICIAL.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The Annals, vol. 82, whole No. 171. Industries in readjustment. Philadelphia, Thirty-sixth Street and Woodland Avenue, March, 1919. 379 pp.*

The articles in this number are grouped into five classes: Industries in readjustment; capital and labor in readjustment; economic utilization of industrial equipment; standardization of industrial equipment; and the industrial and financial outlook. Articles of special interest in connection with labor problems include: Humanizing industry, by Irving Fisher, of Yale University; The labor aspect of reconstruction, by Clarence M. Woolley, of the War Trade Board; The civil service in postwar readjustment by Herbert E. Morgan, of the United States Civil Service Commission; Reconstruction—a survey and a forecast, by A. J. Portenar, of the United States Employment Service; and How American manufacturers view employment relations, by Steven C. Mason, president of the National Association of Manufacturers. Other subjects of special interest are food in the reconstruction period, cooperation, competition and combination, and the readjustment of prices.

AMERICAN ECONOMIC ASSOCIATION. *The American economic review, March, 1919. Ithaca, N. Y., 1919. 212 pp. Price, \$1.25.*

Articles of special interest in this number are: Price fixing in a competitive industry: A pioneer case, by Lewis H. Haney; The Federal farm loan system, by George E. Putnam; and Labor turnover, by George J. Eberle. The author of the last article emphasizes the point that a certain portion of labor turnover is desirable, and divides the study and solution of this problem into two broad phases: (1) To define and discourage undesirable labor turnover; and (2) to define and encourage desirable labor turnover, and lays stress upon home ownership as a remedy for undesirable labor turnover, which is usually either ignored or not accorded the prominence it deserves.

— *Supplement. Papers and proceedings of the thirty-first annual meeting, Richmond, Va., December, 1918. Ithaca, N. Y., March, 1919. 368 pp. Price, \$1.25.*

A brief notice of this meeting was given in the MONTHLY LABOR REVIEW of February, 1919, pp. 85, 86, before the receipt of the present report with full account of papers and proceedings. Three of the papers contained in the report were also published in full in the March, 1919, issue of the REVIEW, as follows: The possibility of compiling an index of the cost of living, by Royal Meeker, pp. 1-9; Stabilizing the

dollar, by Irving Fisher, pp. 10-14; A legal dismissal wage, by Edward Alsworth Ross, pp. 15-19. Other papers of special interest are Effect of Government control on marketing methods and costs, by B. H. Hibbard—this paper being in the nature of a preliminary sketch of work which is being done by the Committee on Markets; Provisions of the Food Act and activities which should be made permanent, by W. F. Gephart; Tenancy in an ideal system of landownership, by Richard T. Ely and Charles J. Galpin; Land tenure and public policy, by William Kent; Some purposes and results of price fixing, by G. F. Warren; The possibilities of price fixing in time of peace, by T. N. Carver; Price-fixing policies of the Food Administration, by Lewis Cecil Gray; The psychological basis for the economic interpretation of history, by William F. Ogburn; Securing the initiative of the workman: Industrial and national organic unity a necessity for developing individual initiative, by Robert B. Wolf.

AMERICAN ECONOMIC ASSOCIATION. *The American economic review*, March, 1919. Supplement No. 2. Report of the committee on war finance. Ithaca, N. Y., March, 1919. 144 pp. Price, 50 cents.

AMERICAN FEDERATION OF LABOR. New York (State) branch. *Reconstruction program adopted in conference of representatives of the unions of the State*. Albany, January 16, 1919. 14 pp.

— Wisconsin branch. *The next steps. A program of construction*. Milwaukee, 1919. 26 pp.

The introduction calls attention to three points to be kept in mind in studying this program. "The first is that we are presenting not a complete program of reform but a single statement of the next steps to be taken in Wisconsin. \* \* \* The second thing to keep in mind is that we are under no delusion as to the inefficacy of any one of these measures taken alone to bring about desired results. \* \* \* The third point is that we insist that every piece of legislation affecting labor be made to fit perfectly with this program in order that certain acts proposed in the interest of labor may not be detrimental to its success until all fundamental items in the program are secured."

AMERICAN WOOL AND COTTON REPORTER. *Directory of manufacturers*. Boston, March 6, 1919. 1130 pp. Section 2. Vol. 33, No. 10. Price, \$3 per annum.

AMERICAN YEARBOOK. *A record of events and progress 1918*. Edited by Francis G. Wickware, with the cooperation of a supervisory board representing national learned societies. New York, D. Appleton & Co., 1919. 850 pp.

BARKER, J. ELLIS. *Economic statesmanship. The great industrial and financial problems arising from the war*. London, John Murray, 1918. 408 pp.

Much of the subject matter in this book is based upon, or has more or less reference to, the author's study of political, social, and economic conditions in the United States and in Canada. The feature of the book, as stated by him, "is that it analyzes the causes of America's success and that it considers the great economic problems of the future in the light of American experience, so that England and the Empire may learn from America's example." The chapter on Labor and capital after the war is devoted chiefly to a comparison of American industrial conditions—wages, hours, etc.—with those of Great Britain.

BOWLEY, ARTHUR L. *The division of the product of industry. An analysis of national income before the war*. Oxford [England], Clarendon Press, 1919. 60 pp. Price, 2s. 6d. net.

In view of the inconsistent estimates offered by different writers on this subject the author of this work considered it "expedient to examine closely the statistics on which they are based, and to restate them in such a way as to show the amount and the origins of the aggregate incomes of the people of the United Kingdom and the proportions of the aggregate that go to various economic classes." As a result of this examination he finds that "the spendable wealth of the nation derived from home industry has been grossly exaggerated by loose reasoning," and says that "When it is realized that the whole income of the nation was only sufficient for reasonable needs if equally

divided, luxurious expenditure is seen to be more unjustifiable even than has commonly been supposed, and the problems of obtaining a distribution that is more reasonable and of reducing poverty appear more difficult, though none the less urgent."

CAMERON, JAMES R. *Instruction of disabled men in motion-picture projection. An elementary textbook.* New York, Red Cross Institute for Crippled and Disabled Men, 1919. 140 pp.

Based upon the course of instruction in motion-picture operation introduced in the Red Cross Institute in May, 1918, with the author of this book as instructor. All of the men who have taken up this course, with one exception, have passed the municipal examination, and have secured positions through the institute.

CARVER, T. N. *Four labor programs.* Cambridge, Harvard University Press, 1919. pp. 344-367. Reprinted from the *Quarterly Journal of Economics*, Vol. 33, February, 1919.

The author believes that all programs for the improvement of the condition of the wage earners fall into four general classes, though there are many combinations and mixtures of these four. He arranges the four classes as follows: Programs depending upon voluntary agreements among free citizens—namely, I. The balancing-up programs and, II. The Collective bargaining programs; and programs depending upon authority and compulsion, namely, III. The voting programs, and IV. The fighting programs. Each one of these programs is then treated in detail in its application to American institutions.

CENTRAAL BUREAU VOOR SOCIALE ADVIEZEN. *Jaarverslag, 1918.* [Amsterdam, 1918.] 31 pp.

Annual report for year ending June 30, 1918, of the central bureau for Advice on Social Questions, a private organization both endowed and subsidized. It may be described as an office of social counsellors.

CITY CLUB OF NEW YORK. *Reconstruction program, 1919.* New York, 1919. 12 pp.

The program submitted in this pamphlet includes outlines for Social insurance: 1. Workmen's compensation. 2. Workmen's health insurance. 3. Old age retirement allowance. 4. Unemployment insurance; Public work to reduce unemployment; Public employment service; Land colonization; Housing; Taxation; Minimum wage legislation; Education; Port development; and Democratic shop management.

CONFÉDÉRATION GÉNÉRALE DU TRAVAIL. *Rapports des comités et des commissions pour l'exercice 1914-1918 présentés au XIX<sup>e</sup> congrès corporatif XIII<sup>e</sup> de la C. G. T. tenu à Versailles, du 15 au 18 Juillet 1918.* Paris, Imprimerie Nouvelle (Association Ouvrière), 1918. 89 pp.

This report of the General Confederation of Labor (France), which was presented at the Nineteenth Corporate Congress (thirteenth of the Confederation), held at Versailles, July 15 to 18, 1918, may be divided into two parts. The first part comprises brief accounts of the conferences of the Confederation held during the war, and of its cooperation with the Government in relief work. Among its friendly society activities were measures for the prevention of unemployment, direct assistance to the families of workmen at the front, the supply and distribution of food, and efforts to reduce the high cost of living. Part two discusses the international action of the Confederation in the days preceding the declaration of war and from August, 1914, to June, 1918. An account of this Confederation is given in the MONTHLY LABOR REVIEW for March, 1919 (p. 75).

CROSS, JOHN J., AND OUTHWAITE, LEONARD. *Personnel management. Topical outline and bibliography.* [Washington.] January, 1919. 59 pp.

Prepared by two officers of the Classification Division, Adjutant General's Office, as an aid to personnel adjutants during the period of discharge in their relations with the Federal Employment Service and civilian employers, the new work of discharging enlisted men having brought the personnel management into close relations with



representatives of the Federal Employment Service and entailed new problems regarding the instruction of soldiers being discharged as to employment possibilities.

DUCHÊNE, G. *Les progrès de la législation sur le minimum de salaire avec la traduction des derniers textes législatifs des États-Unis.* Paris, 1918. VI, 198 pp.

This volume is a study of wages, and is more especially devoted to the development of minimum wage legislation in the various countries. A preface by Georges Renard says the author has traced a brief but thoroughly authenticated history of the progress of the movement guaranteeing laborers at least their existence.

FABIAN SOCIETY. *Thirty-fifth annual report for the year ended March 31, 1918.* London, The Fabian Society, 1918. 23 pp.

A concise account of the activities and finances of the society for the time indicated, together with rules of the society.

GARDE, ERIK. *Undersøgelser over sygeligheden blandt arbejdere i danske papirfabrikker af Læge Erik Garde.* Copenhagen, 1917. 58 pp., 7 fold. tables. (In *Meddelelser fra Universitetets hygiejniske institut, II, 1914-17, Copenhagen, 1918.*)

Comprises the results of an intensive study of the health conditions among workers in the paper industry. The study was undertaken for the advisory labor council of the factory administration in order to determine whether the paper industry is one which exposes the workers to such dangers to health as to justify reducing hours of employment therein. Dr. Garde made the investigation for the special committee of the labor council, the statistical department prepared data as to the health of paper workers in 1915-16, and Prof. Lundbye made a study of the temperature and humidity in paper factories.

GENERAL SOCIETY OF MECHANICS AND TRADESMEN OF THE CITY OF NEW YORK. *Report, vol. 133, 1918.* New York, 1919. 117 pp. Illustrated.

GILES, FREDERIC MAYOR, AND GILES, IMOGENE KEAN. *Vocational civics. A study of occupations as a background for the consideration of a life career.* New York, The Macmillan Co., 1919. 252 pp.

The plan and foundation of this volume were the result of an experiment in vocational guidance carried on for a period of years by the late Mr. Giles while he was a high-school principal. The book contains chapters on Finding your place in the world of occupation; Government service; Earth occupations; Transferring occupations; Manufacturing and the building trades; Commercial occupations; The professions; Personal services and professions for entertainment; and Personal qualifications.

GOWIN, ENOCH BURTON. *The selection and training of the business executive.* New York, The Macmillan Co., 1918. 225 pp.

HALDANE, LORD [RICHARD BURDON]. *The future of democracy. Report of an address delivered at a meeting under the auspices of the Workers' Educational Association, Coventry branch, in St. Marys Hall, Coventry, on 13 April, 1918.* London, Headley Bros. (Ltd.), 1918. 21 pp. Price, 1s. net.

Taking as his ideal of democracy "the infinite value of human personality, humble and great standing on the same footing," the author traces the possible application of this ideal to working conditions and "to the point that our ideal for the workman is that he should be neither a laborer nor a capitalist, but a director, receiving the wages of a director, which will vary very much according to his capacity." He believes that a six-hour working day is a practical possibility under conditions which he points out, and says, "If you get rid of the monotony of labor, educate your workman, give him a good home, treat him properly, and see that these minima are maintained, have your electricity taking the place of the deficiency of power that there is at the present time; if you get the human machine as far as possible superseded by the machine directed by the man with a certain professional skill, the educated workman, you will have gone a long way towards the point where the elite of talent may take the place of the old-fashioned aristocracy. That is what I believe in; that is what I mean to



work for; that is what I hold to be the only thing that in the days in which we live can give stability to the Constitution of this country."

HALSTEAD, WILLIAM RILEY. *The tragedy of labor. A monograph in folk philosophy.* New York, The Abingdon Press, 1919. 107 pp.

A brief discussion of social and economic problems and tendencies of to-day on their human side, under the headings of Appropriation; Private property and the wage; The opportunity to make a living; The community and the classes; The economic side of socialism; The soil.

HART, HASTINGS H. *Social problems of Alabama. A study of the social institutions and agencies of the State of Alabama as related to its war activities.* Montgomery, December, 1918. 87 pp. Russell Sage Foundation. C. H. 38.

In a section devoted to the labor problem the author says: "The labor problem in Alabama is more complicated than in any other Southern State, because of the great and growing industrial development of the State. This development has not only resulted in bringing in a considerable emigration of foreign labor and skilled labor from Northern States, but it has also affected materially the Negro labor problem. \* \* \* It is impossible to predict at this time the outcome, but it indicates a permanent change in labor conditions and calls for wisdom, patience, and statesmanship to meet the changing situation."

HELEN S. TROUNSTINE FOUNDATION. *The Social Unit Organization of Cincinnati*, by William J. Norton. *Studies*, vol. 1, No. 5. February 1, 1919. Pp. 181-187.

The result of an investigation of the Social Unit Organization of Cincinnati, made at the invitation of the Helen S. Trounistine Foundation, to discover what the original plan was that the promoters of the Social Unit Organization announced before they were asked to go to Cincinnati; whether any departure had been made from this plan, and especially whether its officers and employees had been using the organization for the dissemination of any political or economic doctrine. Mr. Norton's report reaches the conclusion that the Social Unit Organization has not departed from its original plan and that there is no evidence of any political connection or political propaganda; and the report is accepted by the committee appointed to consider it for the Helen S. Trounistine Foundation. The purpose of the Cincinnati Social Unit Organization, as stated in its constitution, is "to hasten the coming of a democracy both genuine and efficient by building up on a basis of geographical units an organization through which the people can get a clear idea of their common needs and can utilize the technical skill of the occupational groups in formulating and carrying out programs to meet those needs.

HETHERINGTON, H. J. W., AND MUIRHEAD, J. H. *Social purpose. A contribution to a philosophy of civic society.* London, George Allen & Unwin (Ltd.), 1918. 317 pp.

Ethical values are the concern of this work which traces social purpose in its aims and manifestations through various present-day institutions and the problems involved in their working. The aim of the authors has been to demonstrate the fact that "However manifold the forms in which social purpose expresses itself, its nature and principle are one and indivisible." Of special interest is the chapter on The industrial system, which considers in turn: Industry as an institution, The ethical values of industry, New movements of industry, Examination of tendencies, and The possibilities of large-scale industry. In reference to New movements in industry the authors say: "It is clear that so long as we maintain large-scale industry, we maintain thereby extreme specialization of function, and therefore essentially monotony. In the long run the only way to get rid of monotony is to revert to a much more primitive and much less productive economic order. On the other hand, a much greater degree of democratic control is perfectly compatible with the maintenance of large industries; and the chief reason why the reformist movement in this country has

concerned itself mainly with this side of the problem is that it has assumed the permanence of great industrial organizations. We may distinguish, then, four proposed lines of reform." The first of these, prominent both in France and Russia, where large-scale industry has not established itself so comprehensively as in Great Britain, is a return to a system of small-scale production. Its ideal is the small rural community, which will from within itself produce all the primary requisites of human life. The second is the Syndicalist or Industrial Unionist movement. The third is the system called Guild Socialism. And the fourth is a school which holds that while the policy of the Guild Socialists is eminently and immediately practicable, the ultimate aim of reform should be to replace the great national guilds by local guilds—apparently an attempt to reach the ideal of the small production unit by means of the national guild. The conclusion is reached, after an examination of the claims of these four lines of reform, "that the ethical values which we hope to win from industry must be sought in relation to all the values of social life, and every industry be regarded as an instrument of social purposes which are shared by others than those who carry it on." The book is the outcome of a series of lectures delivered at the University College of Wales, Aberystwyth, in August, 1916, to the summer school of the Civic and Moral Education League.

HOPKINSON, SIR ALFRED. *Rebuilding Britain. A survey of problems of reconstruction after the World War.* London, Cassell Co. (Ltd.), 1918. 186 pp.

Reconstruction problems are considered in this work in five parts: The course; Peace—International peace, Political peace, Industrial peace, Religious peace; Retrenchment; Reform; and The goal. Under Industrial peace chapters are devoted to industrial councils, hours, and wages.

INTERNATIONAL INSTITUTE OF AGRICULTURE. *Annuaire International de Législation Agricole. VII<sup>ème</sup> Année 1917.* Rome, 1918. lxxiv, 1220 pp.

The character of agricultural legislation in 1917 was exceptional owing to the influence of conditions produced by the war. As indicated by the title, the volume is a compilation of laws enacted relative to agriculture in its broadest sense: commercial statistics; products, machinery, manures, and live stock; financial laws, including taxes, customs, duties, etc.; crops and vegetable products industries; live stock-breeding, organization, and education; plant enemies; cooperation, insurance, and credit; rural property; relations between capital and labor; and rural hygiene and protective measures.

JENKINSON, M. WEBSTER. *The workers' interest in costing. (A factor of industrial reconstruction.)* London, Gee & Co. (Ltd.) 1919. 27 pp.

The author, who is controller of factory audits and costs at the Ministry of Munitions, in presenting this paper before the Industrial Reconstruction Council, January 28, 1919, says that "at a certain factory the tool-room cost for each production unit of 1,000 articles manufactured was 10s. (\$2.43); at a corresponding factory the cost was 4s. 6d. (\$1.10) per unit." In eight months after a costing system was introduced in the tool room the cost per unit was reduced from 10s. (\$2.43) to 2s. 10d. (\$0.69) per unit. Improvements effected by the introduction of this system were: (1) The firm reduced the tool cost by 72 per cent; (2) the tool-room operatives earned higher wages owing to the reduction in wasters and consequent increased production; (3) the foremen and charge hands received a bonus above their normal wage; (4) the works operatives were insured a regular supply of tools, thus facilitating production and avoiding the idle time which had previously occurred.

It is not stated that these improvements were actually produced by the introduction of the costing system, but were rather the result of efficient organization, still, according to the testimony of the manager, the information available therefrom made the reduction possible by serving as a guide to the management in detecting and correcting weak spots. In discussing the opposition of workers to a costing system,

the writer expresses the opinion that once the workers are convinced that such a system secures economy in time, effort, and material to both employer and employed and, therefore, means higher wages, their support and assistance will be given.

JEWISH AGRICULTURAL AND INDUSTRIAL AID SOCIETY. *Annual report for the year 1918. New York, 174 Second Avenue. [1919.] 49 pp.*

Gives detailed reports on war activities, the farm loan department, loans and purposes of loans, equities of borrowers, repayments, farm finding bureau, farm labor bureau, sanitation bureau, and other matter. The farm labor bureau placed 1,009 men in first placements in 1918 as against 1,529 in 1917. The farm finding bureau directed the settlement of 49 farmers, while the loan department reported the granting of 360 loans aggregating \$222,937.12.

LANE, RALPH [NORMAN ANGELL]. *The British revolution and the American democracy. An interpretation of British labor programs. New York. B. W. Huebsch, 1919. 319 pp.*

In this analysis of British labor programs and the forces behind them and their relation to American democracy an attempt is made, to quote the author, "to explain the outstanding moral forces which have brought these programs into being, and with which the world will have to reckon in facing its problems of reconstruction."

LEGAL AID SOCIETY. *Forty-third annual report of the president, treasurer, and attorney, for the year 1918: New York, 1919. 72 p.*

During the year covered by the report 38,287 applications for legal advice and assistance were received by the society, this number being 6,333 less than for the year 1917. The principal nationalities represented were as follows: Russian Empire, 4,770; British Empire 4,477; Austria 2,875; Germany 1,664; Italy 1,532; Sweden 1,287; United States 16,424. Of the clients 21,505 were men and 16,782 were women; 14,567 were aliens; 16,424 native born; and 7,296 naturalized citizens.

LEITCH, JOHN. *Man-to-man. The story of industrial democracy. New York, B. C. Forbes Co., 1919. 249 pp.*

The data in several chapters of this book are founded on the experiences of certain manufacturers with their employees. The chapters cover: The factory worker of to-day; Why men strike; Building men to build pianos; Out of a confusion of tongues; The supervision that counts; Must a foreman be a pugilist? Industrial democracy; Industrial democracy, the employees, and the unions; Industrial democracy and the employer; Keeping alive the community spirit; and Putting labor behind America.

LÉMONON, ERNEST. *L'après-guerre et la main-d'œuvre Italienne en France. Paris, Librairie Félix Alcan, 1918. 90 pp.*

This volume deals with the problem of Italian labor in France after the war, which the author considers of special importance in a consideration of emigrant labor.

MACKENZIE, J. S. *Outlines of social philosophy. London, George Allen & Unwin (Ltd.), 1918. 280 pp.*

The object of this book is to provide a suitable textbook for students of the subject. The work has grown out of a short course of lectures delivered at the London School of Economics and Political Science in 1916-17. The book is in three parts: The foundations of social order; National order; and World order. In the second part is a chapter devoted to industrial institutions.

MAURRAS, CHARLES. *Les chefs socialistes pendant la guerre. Paris, Nouvelle Librairie Nationale, 1919. 320 pp.*

Sketches of the activities of socialist leaders in France during the war.

NATIONAL ASSOCIATION OF MANUFACTURERS. (*Report on business conditions and probabilities.*) *New York City, April 8, 1919. 21 pp.*

This pamphlet contains the expression of individual opinion of many members of the association with regard to business conditions and prospects. The canvass of the membership covered 4,400 large firms in practically all lines of industry and the survey shows that "with the exception of 5 out of 22 principal groups of industries



throughout the United States, business activity is approximately between 25 and 50 per cent of normal." There are discussions of the methods necessary to relieve business of the after-war uncertainty and to insure a return to general prosperity and reports of the results of the survey on the following topics: Conditions of stock on hand as compared with normal prewar supply; The scale at which buying stands; The relative importance of foreign and domestic markets for the immediate future; Government ownership of public utilities; Private ownership of public utilities under Government regulation; The repeal of the LaFollette seamen's law; Legalized fixed resale prices on trade-marked articles; A legally vested national labor board to adjudicate disputes; Imposing of statutory (legal) responsibility on trade-unions.

NATIONAL CHILD LABOR COMMITTEE. *The child labor bulletin, February, 1919.* 105 East Twenty-second Street, New York City. 69 pp. 50 cents.

This issue of the bulletin is largely devoted to a report of the fourteenth annual conference on child labor, and to a discussion of State programs for social legislation in 1919. The conference dealt with Federal aid to State education, the health of school children and working children, the new Federal child-labor measure, and child-welfare programs. A prominent feature of the legislative programs is the growth of the movement toward codification of State laws relating to children.

NATIONAL EFFICIENCY QUARTERLY. *Reconstruction.* Vol. I, No. 4, New York, February, 1919. Pp. 241-350.

This publication, which is the fourth number after its succession to the Efficiency Society Journal, contains three articles of special interest. The first of these is "Hiring," by Norris A. Brisco, of the State University of Iowa, in which the old system of hiring workers on the snap judgments of foremen or superintendents is condemned as highly inefficient and expensive; a new method of hiring by specially trained experts having special ability to judge human nature and who have made an intensive study of the various jobs and their requirements in his employers establishment is advocated. Great emphasis is laid upon choosing men who are physically fit, and the suggestion is made that physicians be retained to give applicants for work careful examinations.

In an article on "Disabled Men in War and Peace," Paul S. Pierce, professor of Economics in the State University of Iowa, after giving a brief sketch of former methods of dealing with disabled soldiers and sailors, outlines the proper manner of conducting rehabilitation work. This article reviews the work of various organizations, both private and governmental, in rehabilitating the disabled soldier or sailor not only in a physical way but also by reeducation and employment.

In "Health Insurance," by S. W. Wassan, also of the State University of Iowa, statistics are cited showing the condition of the health of the United States, the numbers of workers who become sick annually, and the amount of money lost by their idleness. The whole article is a practical plea for the establishment of systems of health insurance over the United States.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *War-time changes in the cost of living, July, 1914, to November, 1918.* Boston, 1919. 15 Beacon Street. 33 pp. Research report No. 14.

In its Research Report No. 9, which was noted in the MONTHLY LABOR REVIEW for November, 1918 (pp. 328, 329), the board presented a statement of war-time changes in the cost of living in representative communities from July, 1914, to June, 1918. The present report is supplementary, covering the period July, 1914, to November, 1918, thus showing for the entire war period the increases in the various items entering into the cost of living. The figures are given as general averages only, representing the country as a whole. The following table shows for each budget item the increases in the cost during the war period and the increases in cost as related to total budget. For purpose of comparison similar figures from the preceding report (Research Report No. 9) are included.



PER CENT OF INCREASE IN THE COST OF LIVING, JULY, 1914, TO NOVEMBER, 1918,  
DETERMINED BY NATIONAL INDUSTRIAL CONFERENCE BOARD.

Item.	Relative importance in family budget.	Per cent of increase in cost over 1914 at—		Per cent of increase over 1914, as related to total budget, at—	
		June, 1918.	November, 1918.	June, 1918.	November, 1918.
Food.....	43.1	62	83	26.7	35.8
Shelter.....	17.7	15	20	2.7	3.5
Clothing.....	13.2	77	93	10.2	12.3
Fuel and light.....	5.6	45	55	2.5	3.1
Sundries.....	20.4	50	55	10.2	11.2
Total.....	100.0			52.3	65.9

The most marked increases were noted in the cases of clothing and food. The advance in the cost of these two items, although varying somewhat from place to place, were, on the whole, fairly uniform; differences in these must, however, at times be considered. Much wider deviations from the average increases occurred in rents and in the prices of fuel. For these, particularly, some adjustments may be required in applying to specific communities the general average increase reached by the board. By making due allowance for local variations, however, the board's figures may readily be applied to most American communities.

NATIONAL LABOR CONGRESS ON THE MOONEY CASE. *Proceedings, Chicago, January 14 to 17, 1919. San Francisco, International Workers' Defense League, 307 Russ Building, 1919. 71 pp.*

NATIONAL TUBERCULOSIS ASSOCIATION. *Framingham Community Health and Tuberculosis Demonstration. Tuberculosis findings. Framingham, Mass., March, 1919. 35 pp. Charts. Monograph No. 5. Medical Series III.*

One of the series of monographs being published by a special committee of the National Tuberculosis Association in a "drive for health" carried on in Framingham, Mass. Three of the previous monographs of the series were noted in the January, 1919, issue of the MONTHLY LABOR REVIEW. In the present report it is intended to consider all of the cases of tuberculosis that have come to the attention of the Health Demonstration from the beginning of the work in Framingham, January 1, 1917, to November 15, 1918. Among the main points emphasized by the data secured through the investigation are that the total number of cases under care during the demonstration was 242, with an additional 69 suspicious cases; that Framingham is a typical industrial American community with a population of about 17,000, the industrial population approximating 6,000; that 55 per cent of the deaths were of persons between 16 and 45 years of age, and that 63 per cent of the living cases are between these ages; that 33 per cent were recorded as "housewives," or were engaged in housework; and that the application of the Framingham findings to the United States as a whole would indicate that there are about 1,000,000 active cases and over 2,000,000 active and arrested cases in the country.

NORSK CENTRALFORENING FOR BOKTRYKKERE. *Aarsberetning, 1917. Christiania, 1918. 100 pp.*

Comprises the annual report for 1917 of the National Federation of Book Printers of Norway. The average membership during 1917 was 3,050 as compared with 2,881 in 1914.

OPEN STAIR DWELLINGS CO., NEW YORK CITY. *Annual report, February 1, 1919. [New York City, 1919.] 4 pp.*

Six years ago the company built an open stair tenement in New York City with accommodations for 281 families. In 1917-18 the company erected two tenement units, one opened November 21, 1917, the other February 20, 1918, where 216 families have been sheltered for about a year. The working people of the neighborhood constitute the bulk of the tenants.

PHELPS, EDITH M. *University debaters' annual. Constructive and rebuttal speeches delivered in debates of American colleges and universities during the college year 1917-18.* New York, The H. W. Wilson Co., 1918. 276 pp.

The debates are arranged under the following heads: Compulsory arbitration of industrial disputes; Government price control; League of Nations to enforce peace; Federal regulation of industry; and Minimum wage.

PRINTING TRADES BLUE BOOK. *The standard directory of the printing trades, its branches and kindred crafts. Greater New York and surrounding towns edition.* New York, A. F. Lewis & Co., 1919. 473 pp. Price, \$3.

PUBLIC AFFAIRS INFORMATION SERVICE. *Governors' messages. Bulletin, February 15, 1919.* New York City, The H. W. Wilson Co. 23 pp.

Employment (especially of returned soldiers) on public works during the period of transition from war to peace is urged in three governors' messages to their respective legislatures, and in three others appeal for cooperation and assistance in the matter of providing employment for returned soldiers is made. The governor of New Jersey reports that labor agencies of that State are making a careful survey of the industries for the purpose of locating available jobs, while the governor of Pennsylvania states that 40,000 positions are open to soldiers in his State. The governor of Wisconsin expresses the opinion that the soldier can easily find employment in agriculture, since labor there is scarce; in his opinion one of the chief employment problems lies in caring for the woman who took the soldier's place but on his return is thrown out of work.

Creation of a State agency to arbitrate disputes between employers and employees is urged by the governors of New Mexico and Oregon, while the governor of South Carolina expresses approval of the step taken in creating the board of conciliation in that State.

The governor of Rhode Island recommends the establishment of a minimum wage for women in shops and factories. The governor of Wisconsin goes further and urges the creation of a commission, to consist of manufacturers and laborers, having power to investigate any business employing labor, for the purpose of determining whether the wages paid are a reasonable compensation for the services performed.

Enactment of new legislation or amendment of existing legislation for the protection of woman or child workers, or both, is urged in the messages of six governors; two of these specifically recommend the 48-hour week for women.

The subject of workmen's compensation is treated by 16 governors. The governors of Arkansas and Missouri recommend the enactment of a compensation law. Upward revision of the scale of compensation provided for is urged for the laws of Idaho, Maine, Michigan, South Dakota, and Wyoming; and the governors of Colorado, Illinois, Kansas, and New Jersey recommend that study be made of the existing laws with a view to their improvement. Inclusion of occupational diseases in the compensation law of New York is recommended by the governor of that State.

The establishment of a hospital for industrial cripples; enactment of social insurance measures for the creation of commissions to study the subject of social insurance; better safety legislation for the protection of miners; regulation of housing; and vocational training in agriculture, industry, and home economics are some of the other subjects of recommendation.

RED CROSS INSTITUTE FOR CRIPPLED AND DISABLED MEN. *Publications Series I, No. 8. Training in English technical schools for disabled soldiers, by John Culbert Faries.* New York, 311 Fourth Avenue, April 22, 1918. 12 pp.

— *Series I, No. 11. The vocational school for disabled soldiers at Rouen, France, by J. Breuil. Translated by Gladys Gladding Whiteside.* New York, May 13, 1918. 11 pp.

— *Series II, No. 5. Bedside and wheel-chair occupations, by Herbert J. Hall.* New York, February 25, 1919. 43 pp.

RED CROSS INSTITUTE FOR CRIPPLED AND DISABLED MEN. *Publications. Series II, No. 6. Employment opportunities for handicapped men in the optical-goods industry, by Bert J. Morris. Prepared by the bureau of vocational guidance, division of education, Harvard University, in cooperation with Red Cross Institute for Crippled and Disabled Men. New York, March 10, 1919. 31 pp. Illustrated.*

RED CROSS INSTITUTE FOR THE BLIND. *Publications. The relation of industry to employment provision for the war blind. Baltimore, December 30, 1918. 11 pp. Series I, No. 3. Illustrated.*

A note explains that this pamphlet is a translation from "Kriegsblindenfürsorge und Industrie," in "Ein Jahr Kriegsinvalidenfürsorge unter besonderer Berücksichtigung der Kriegsblinden," Stuttgart, 1916, giving an account of the work in facilitating the return of the German war blind to civil life by the vocational advisory board for war invalids, established in Württemberg Insurance Institute. The pamphlet has been issued as a supplement to the Outlook for the Blind, Vol. XII, No. 4, January, 1919.

— *Rehabilitation of Blinded Soldiers in France. Baltimore, February 10, 1919. 8 pp. Series I, No. 4.*

RENOLD, C. G. *Workshop committees. Suggested lines of development. Manchester (England), Hans Renold (Ltd.), 1917. 34 pp.*

Contains the gist of a memorandum on the subject of workshop committees prepared for presentation to the British Association as part of the report of a special sub-committee studying industrial unrest. The underlying thought of the author of this brochure is that the worker's desire for more scope in his working life can best be satisfied by giving him some voice in the directing of it, and an attempt has been made to work out in some detail the part which organizations of workers might play in works administration. While not primarily an account of the experiments in the Hans Renold plant, the account is admittedly based on its experience with works committees. The four sections of the pamphlet treat of (1) Scope of workers' shop organizations; management questions which could be devolved, wholly or in part; (2) Types of organization; (3) Summary and conclusions of sections 1 and 2; (4) Comments on working.

ROBINSON, J. J. *National reconstruction. A study in practical politics and statesmanship. London, Hurst & Blackett (Ltd.), 1918. 154 pp.*

This book is intended to offer outlines rather than details. It is divided in two parts: The safety and development of the Empire, and The development of the reconstructor. Chapters deal with reconstructors in agriculture and manufactures, the reconstructor as a unit of power, publicity and mass suggestion, and the goal of efficient service.

SAFETY INSTITUTE OF AMERICA. *Safety. Vol. 7, No. 2. New York, 14-18 West Twenty-fourth Street, 1919. Pp. 31-55.*

This number contains articles on Federal standards for safeguarding remote control apparatus; The economic value of the health of the employee, by F. C. Smith, surgeon, United States Public Health Service; New hazards in electric arc welding, by Alfred W. Jansen; and other subjects relating to safety practices. In his article on the economic value of the health of the employee Dr. Smith estimates that workers in the United States annually lose from sickness an average of nine days each, and that each year there are 13,400,000 cases of sickness among workers in the United States, representing an economic loss of \$750,000,000. He adds that sickness causing lost time is but a small part of all actual sickness. Much of this illness among workers is regarded as wholly unnecessary, and the remedies suggested are (1) attention to child hygiene; (2) careful study to determine the proper number of working hours and the most advantageous rest periods; (3) entrance physical examinations of employees and an adaptation of work to their physical condition; (4) medical supervision of employees; (5) some form of health insurance providing for medical care and cash payment to low-wage employees during disability from sickness. The article on



New hazards in electric arc welding is printed in full on pages 245 and 246 of this issue of the MONTHLY LABOR REVIEW.

SMELSER, D. P. *Unemployment and American trade-unions.* Baltimore, Johns Hopkins Press, 1919. 154 pp. Johns Hopkins University studies in historical and political science. Series XXXVII, No. 1.

SOUTHERN SOCIOLOGICAL CONGRESS, 1916-1918. *Democracy in earnest.* Edited by James E. McCulloch. Washington, 1918. 416 pp.

The papers and addresses of these congresses are grouped in nine classes, of which America's fight for democracy; Health for all; Justice for all; Work for all; The child, the woman, and the future Nation; and Negro welfare and race relations cover subjects of special interest to labor. The section devoted to Work for all contains a letter from the Secretary of Labor and articles on: Labor values destroyed by disease, by Josiah Morse; Labor's challenge to democracy, by Frank Morrison; The duty of Southern labor during the war, by Robert Russa Moton, and An open door to industry on the basis of efficiency, by Bishop Theodore D. Bratton.

SPOONER, HENRY J. *Wealth from waste: Elimination of waste a world problem.* London, George Routledge & Sons (Ltd.), 1918. 316 pp.

In this treatise dealing with a wide range of wastes, including waste due to human fatigue, and trade, industrial, household wastes, etc., the author makes a plea for the abandonment of the customs and methods which are responsible for these wastes, and for the more scientific management and conduct of all phases of industrial, social, and economic activities. In the industrial field he states that "much remains to be done in the direction of securing higher wages for the workers and lower labor costs for the employer by the saving of human energy, time, and materials, and by diagnosis for the detection of leaks in producing a particular thing in the quickest and most efficient and economical way." He states also that "if we are to tackle seriously the problem of industrial waste, the cry should be chemists, and still more chemists." In the chapter dealing with waste due to human fatigue the author discusses the ideal working day. He urges that in the effort to reduce fatigue care be exercised lest "we reduce generally the number of working hours below what long experience has proved to be reasonably workable and profitable to all concerned," and states that the division of the day into "eight hours for work, eight hours for sleep, and eight hours for recreation, etc., appears to be little short of an ideal standard for the average worker under present economic conditions; and it makes possible a three-shift or a two-shift system of working, with the considerable economic advantages due to them; but we may well hope that with a general adoption of shorter hours, with improved methods of working, and with unrestricted output, the time will not be far distant when still further reductions in the working hours will be possible."

UNITED STATES STEEL CORPORATION. *Seventeenth Annual Report.* 1918. Hoboken, N. J., 1919. 56 pp. Tables.

The number of employees during the year in the service of the corporation and the subsidiary companies (including employees of Federal-controlled subsidiary railways), the total pay roll and average wages paid, in comparison with similar data for the preceding year, are given in this report, as follows:

Item.	1918	1917	Increase.	Per cent of increase.
Largest number of employees in any one month.....	283,414	277,526	5,888	2.1
Average number of employees during the entire year....	268,710	268,058	652	.2
Total amount of pay rolls.....	\$452,663,524	\$347,370,400	\$105,293,124	30.3
Average salary or wage per employee per day:				
Average for year.....	\$5.38	\$4.16	\$1.22	29.3
Month of December, 1918.....	\$6.26	\$4.65	\$1.61	34.5



VALOIS, GEORGES. *La réforme, économique et sociale*. Paris, Nouvelle Librairie Nationale, 1918. 61 pp.

This is a lecture on economic and social reform, delivered before the commercial and industrial circle of France, in October, 1918. It treats of The economic problem of peace; Economic systems—individualism, Marxian socialism, syndicalism; and The problem of demobilization.

WARMAN, W. H. *The soldier colonists: A plea for group organization*. London, Chatto & Windus, 1918. 180 pp.

In this discussion of the soldier-settlement question a plea is made for the group system. The author believes that some form of community settlement must be a feature of any systematic colonization, both from the practical and from the legislative viewpoint, and suggests regimental units as a possible basis. The volume closes with practical suggestions regarding the development of the group system and several appendixes showing openings for colonization in the various parts of the British Empire.

WILLOUGHBY, WILLIAM FRANKLIN. *The problem of a national budget*. New York, D. Appleton & Co., 1918. 220 pp. Institute for Government Research. Studies in administration.

The fourth volume of a series called "Studies in administration." "In the first is given a description of the system of financial administration of Great Britain, the country which has the oldest and best developed budgetary system in the world, In the second is provided a translation of René Stourm's notable work on the budget, which gives an excellent and detailed account of the French budgetary system. In the third is given a study of the Canadian budgetary system. \* \* \* This last volume has the special value of showing how the British system works under conditions differing from those that prevail in the mother country, and resembling those that exist in the United States."

WITHERS, HARTLEY. *The need for saving in peace time*. London, National War Savings Committee, Salisbury Square, EC 4, 1919. 32 pp. National Economy Series No. 1. Price, 2d. net.

Extracts, altered only to meet the needs of abbreviation, from a book called "Poverty and waste," published in 1914. Its purpose is "to show how the individual citizen could at once, and without waiting for the achievement of any scheme of social reform which he or she might desire, do something definite and practical to reduce poverty."

WOMAN'S OCCUPATIONAL BUREAU. *Vocational information service. Women in banking in the city of Minneapolis*. Minneapolis, 204 Transportation Building, 1919. 23 pp. Occupational bulletin No. 1. Price, 25 cents.